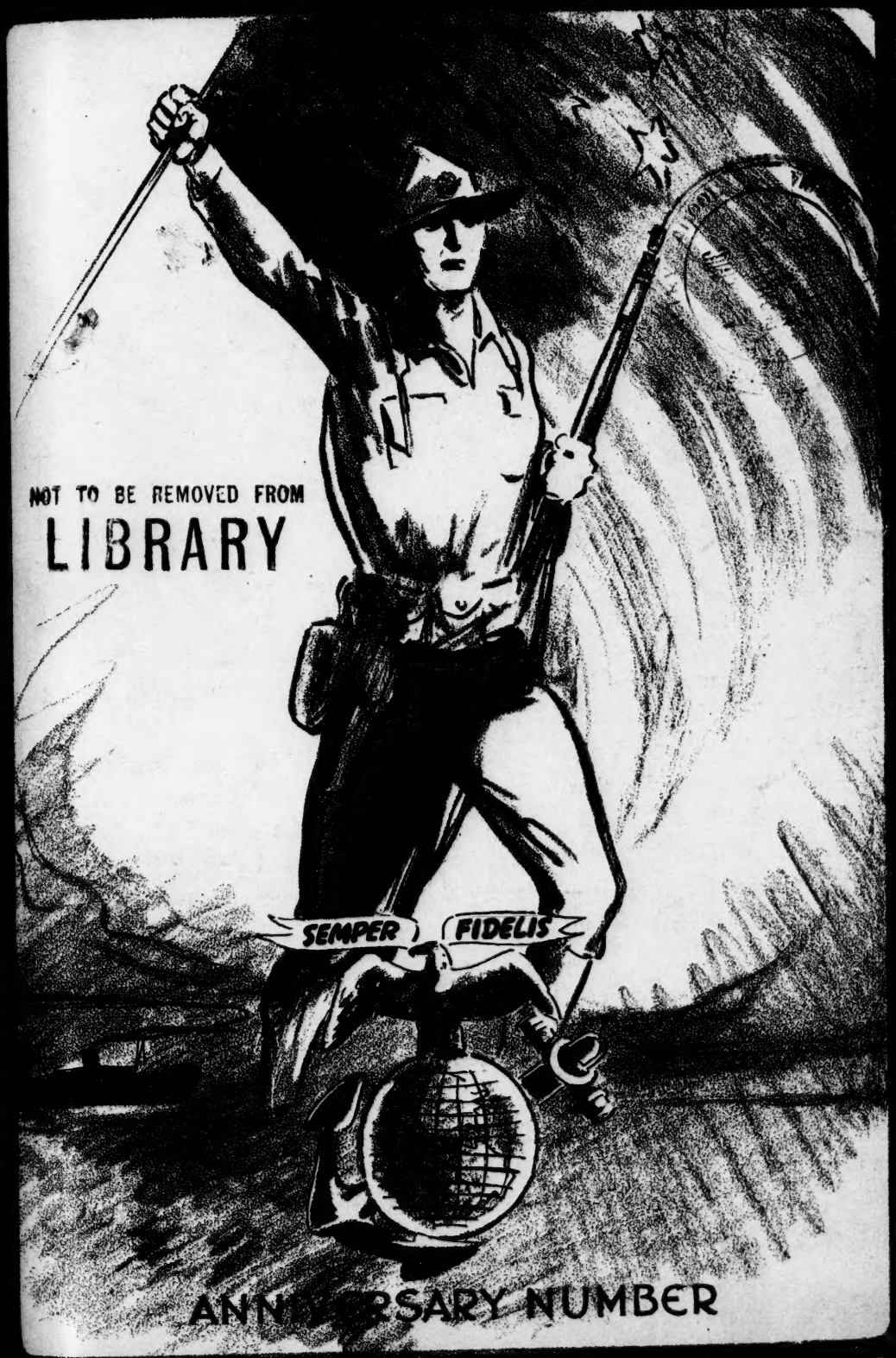
THE MARINE CORPS



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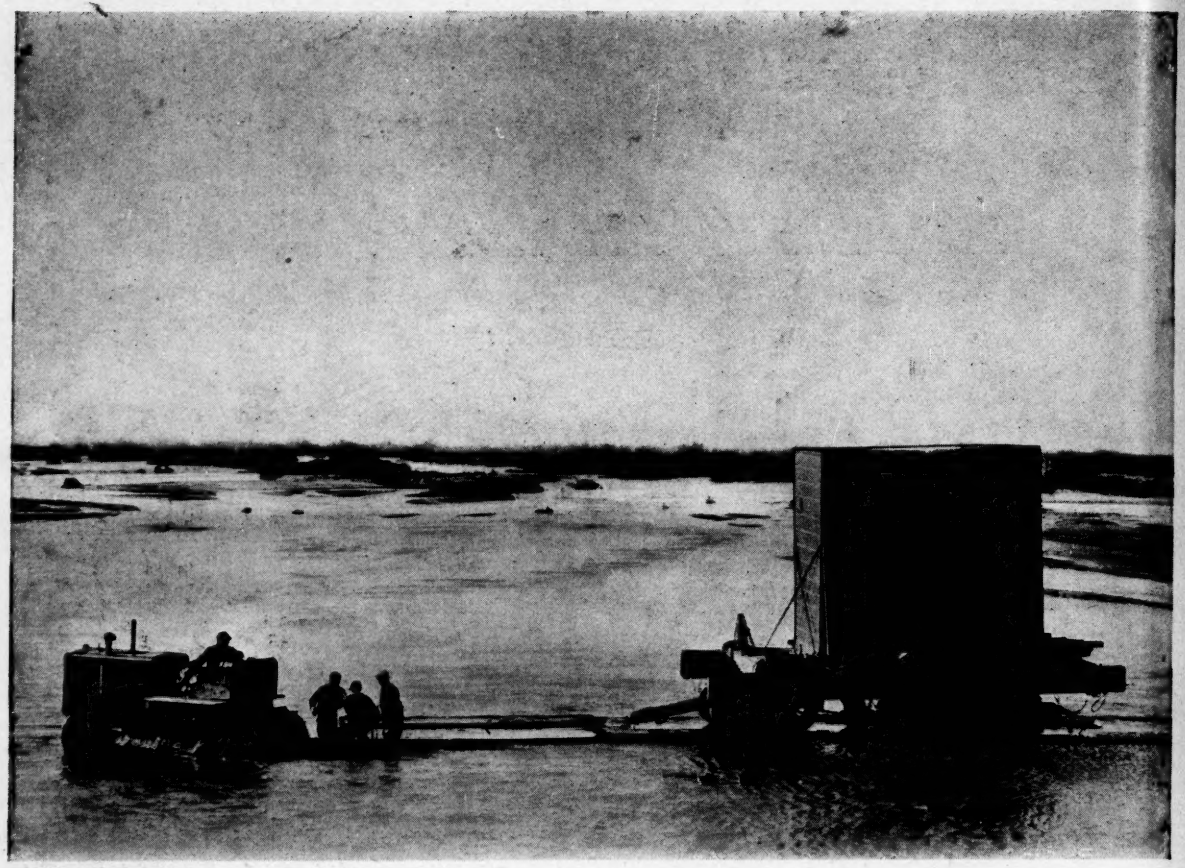

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But they haven't seen *anything* yet!

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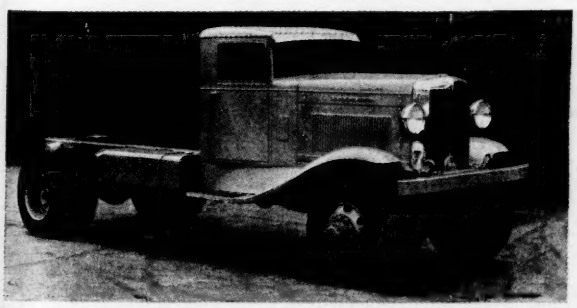
It takes traction—all-wheel-traction—to pull a heavy load of oil rig equipment, or logs, or crushed stone or gravel out across desert or plain, through gulley and stream. It takes *traction,* to go down into excavations, pits and quarries and bring out the kind of loads that cut days off operating schedules. It takes traction—*all-wheel-traction*—to buck and break shoulder deep drifts on snow bound highways.



Yes, it takes traction—but it takes *speed and maneuverability* too, if you want to get the job done on time—and save money in doing it. And you get all three—tremendous traction, high speed and incomparable ease of handling—plus positive dependability and economy—in a Marmon-Herrington *All-Wheel-Drive* Ford.

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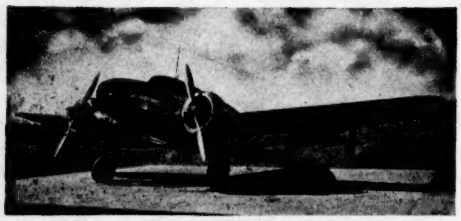

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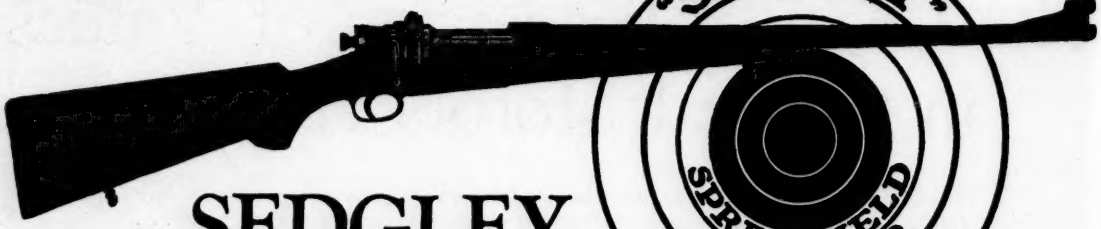

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THE MARINE CORPS GAZETTE

WASHINGTON, D. C.

VOL. 22 ANNIVERSARY NUMBER No. 4

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COVER

SEMPER FIDELIS

(Drawn by Henry Costello)

Opinions or assertions in the articles are the private ones of the writers, and are not to be construed as official or reflecting the views of the Navy Department or the naval service at large.

Entered as second-class matter, March 27, 1929, at the Post Office, Washington, D. C., under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized November 23, 1918.

PATRONIZE OUR ADVERTISERS

THE MARINE CORPS GAZETTE

Vol. 22 ANNIVERSARY NUMBER No. 4

One Hundred Sixty-Three Years

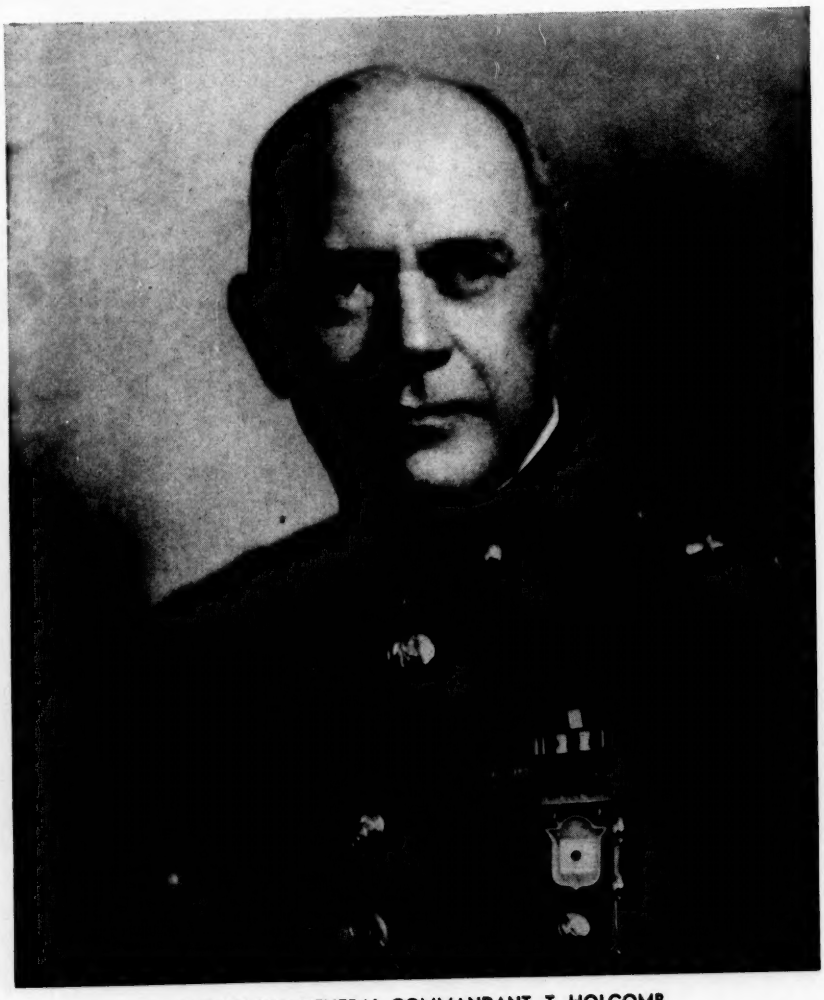
THE MAJOR GENERAL COMMANDANT CUTS THE BIRTHDAY CAKE

1. On November 10, 1775, a Corps of Marines was created by a resolution of the Continental Congress. Since that date many thousand men have borne the name Marine. In memory of them it is fitting that we who are Marines should commemorate the birthday of our corps by calling to mind the glories of its long and illustrious history.

2. The record of our Corps is one which will bear comparison with that of the most famous military organizations in the world's history. During 94 of the 163 years of its existence the Marine Corps has been in action against the nation's foes. From the Battle of Trenton to the Argonne, Marines have won foremost honors in war, and in the long eras of tranquillity at home generations of Marines have grown gray in war in both hemispheres, and in every corner of the seven seas, that our country and its citizens might enjoy peace and security.

3. In every battle and skirmish since the birth of our Corps Marines have acquitted themselves with the greatest distinction, winning new honors on each occasion until the term "Marine" has come to signify all that is highest in military efficiency and soldierly virtue.

4. This high name of distinction and soldierly repute we who are Marines today have received from those who preceded us in the Corps. With it we also received from them the eternal spirit which has animated our corps from generation to generation and has been the distinguishing mark of the Marines in every age. So long as that spirit continues to flourish Marines will be found equal to every emergency in the future as they have been in the past, and the men of our nation will regard us as worthy successors to the long line of illustrious men who have served as "Soldiers of the Sea" since the founding of the Corps.



THE MAJOR GENERAL COMMANDANT, T. HOLCOMB

HEADQUARTERS U. S. MARINE CORPS

WASHINGTON

10 November, 1938

FROM: The Major General Commandant.
TO: The Officers and Men of the Marine Corps.

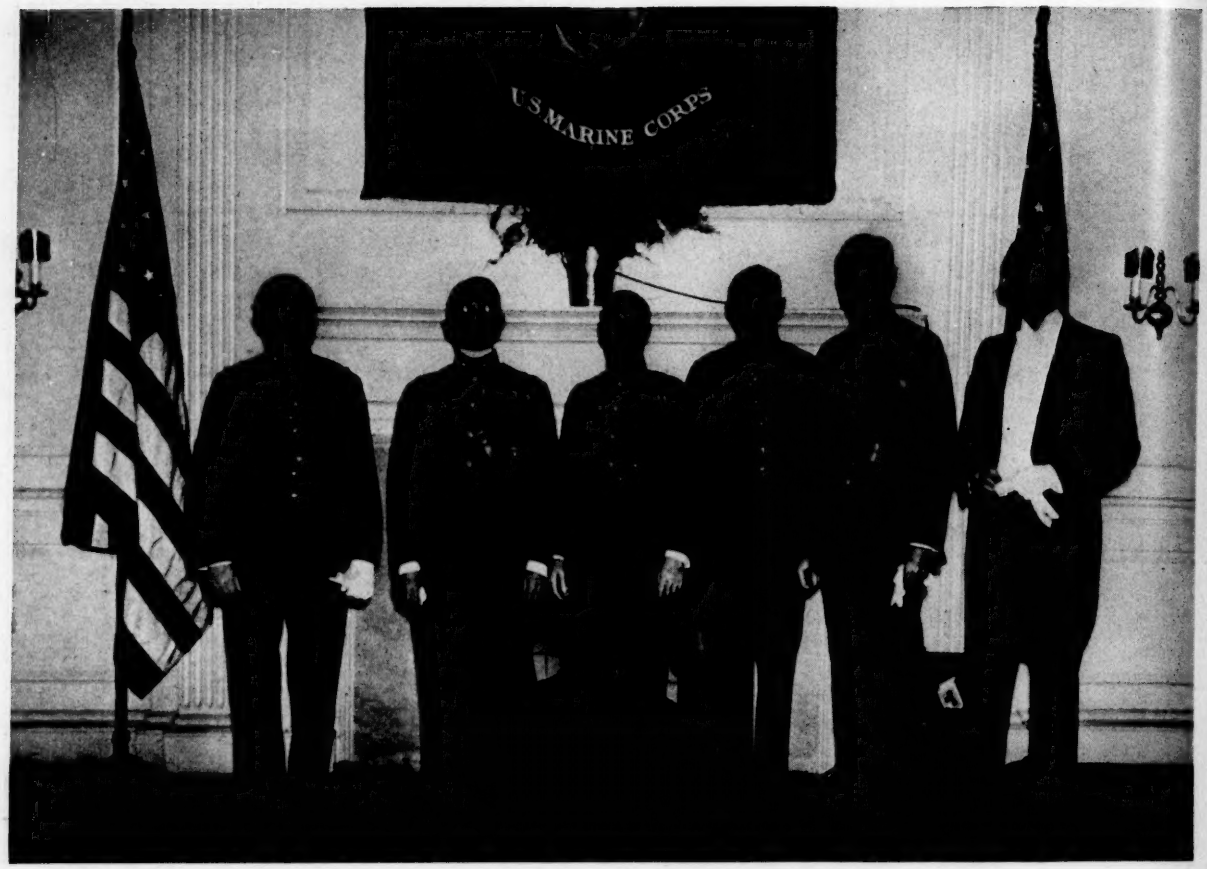
SUBJECT: Anniversary Message.

1. On this, the 163rd anniversary of the founding of the Marine Corps, we may well pause to consider the history of our Corps, draw inspiration from the record of past events, missions accomplished, and ambitions achieved. Let us dedicate ourselves to emulate the examples of those gone before us, resolve to be worthy of those traditions we have long cherished and look forward to building solidly on the foundations now established.

2. With assurance, born of long experience, we will look to the future, consider our problems, scattered though we be, and have faith to accomplish the tasks encountered.

3. My greetings to you on this day

T HOLCOMB.



Left to right: Major General Commandant T. Holcomb; Major General J. C. Breckinridge; Brigadier General F. L. Bradman; Brigadier General R. P. Williams; Brigadier General J. T. Buttrick and Brigadier General R. S. Keyser.

THE SECRETARY OF THE NAVY

WASHINGTON

9 November 1938

From: Secretary of the Navy.

To: Major General Commandant,
United States Marine Corps.

Subject: One Hundred Sixty-third Anniversary of the United States Marine Corps.

1. It affords me great pleasure on the one hundred and sixty-third anniversary of the Marine Corps to extend to the entire Corps, through the Major General Commandant, my heartfelt congratulations on the commendable record that has been yours through the years and to wish you continued success in your valuable contribution to the defense of our country.

/s/ CLAUDE A. SWANSON.

NAVY DEPARTMENT

OFFICE OF THE CHIEF OF NAVAL OPERATIONS

WASHINGTON

8 November 1938

My dear General Holcomb:

I congratulate the officers and men of the United States Marine Corps on the one hundred and sixty-third anniversary of the organization. As an integral part of the Naval Service, we take pride in your untarnished record that dates from the birth of our nation.

Many of our citizens know something of your brilliant World War achievements; others are acquainted with your part in the heroic history of all the wars of our country; but few realize that the success of the Marine Corps in action is, in the main, a result of the rigorous peace time training that those in authority have insisted upon through the years. This efficient preparation attained by officers and men of superior military character make for instant action in emergency and success in the field.

The Marine Corps is deserving of the trust of our people because you have never failed the country in the defense of its policies and ideals. I am confident that the essential military quality symbolized by your proud motto, "Semper Fidelis," will give inspiration for the future as it has so faithfully guided you in the past.

Very sincerely yours,

/s/ WILLIAM D. LEAHY,

Major General Commandant,

United States Marine Corps.

WAR DEPARTMENT
OFFICE OF THE CHIEF OF STAFF
Washington, D. C.

Major General Thomas Holcomb,
Commandant, United States Marine Corps,
Washington, D. C.

Dear General Holcomb:

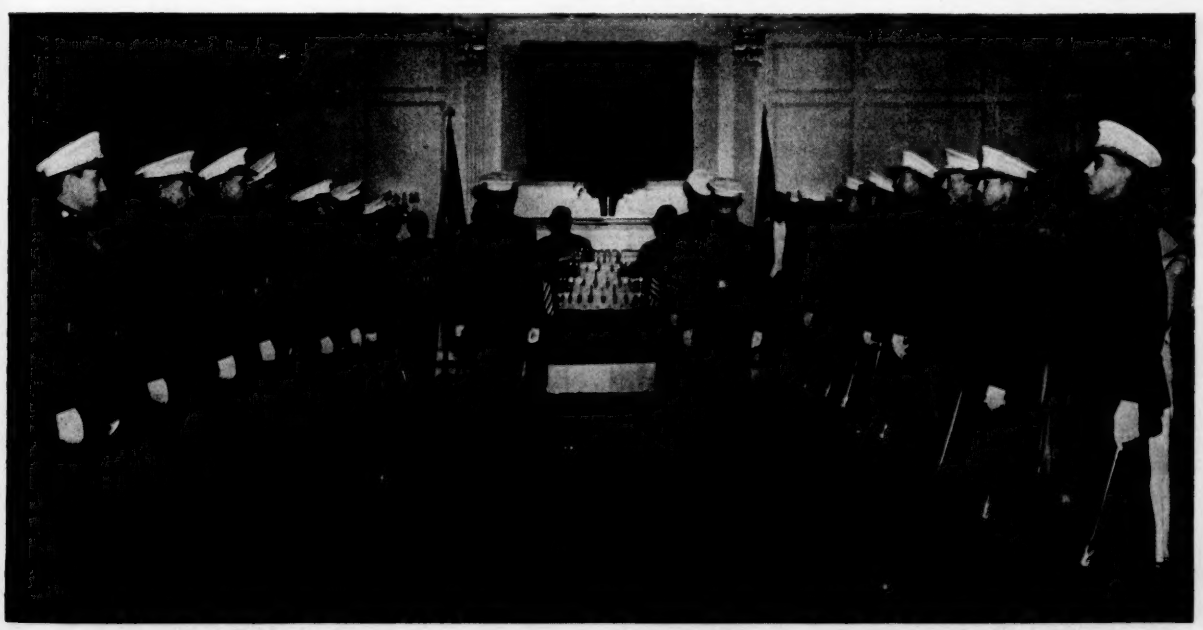
As the anniversary of the 163rd birthday of the United States Marine Corps approaches, it is my sincere pleasure again to extend to your Corps the greetings and felicitations of all personnel of the Army of the United States.

On the November 10th of twenty years ago American soldiers of the sea and soldiers of the land were battling side by side on the banks of the Meuse River, as they had fought side by side throughout our participation in the world's greatest war. From intimate battlefield contact arose within the Army's ranks full appreciation of the courage of individuals, devotion to duty, and loyalty to country which has so highly imbued the United States Marine Corps throughout its long and inspiring history.

On the occasion of the birthday of your Corps we express our profound admiration for the United States Marines.

Cordially yours,
/s/ MALIN CRAIG,
Chief of Staff.

PRESENTATION OF COLORS, BIRTHDAY PARTY



THE BIRTHDAY CAKE WAS WHEELED IN

Battlesights and Bullseyes

CAPTAIN GEORGE O. VAN ORDEN, *U. S. Marine Corps*

(Dedicated to the Range Officer, if any, who finds himself befuddled and bewildered in a maze of calibrated gun sights.)

THE adjustment of rifle sights to meet the requirement of the rifle qualification course that certain rapid fire stages must be fired using the battlesight is one of the more exacting, though not necessarily difficult, duties of those charged with the conduct of target practice.

The solution of the problem lies in the careful organization and thorough instruction of every one in the range party—the range officers, the coaches, the armorers, even the shooters themselves. Each man in control must know exactly what is to be done and how it is going to be done. There must be no question as to the purpose of the battlesight practice nor as to the minimum standard of exactness that will be required of the shooters, the coaches and the armorers in making necessary adjustments to the rifle sights. Where there is doubt, misunderstanding or confusion there will be errors in the adjustments, the purpose of the adjustment will be lost sight of, and there will be no value to the battlesight practice.

The object of the adjustment or calibration of battle sights is to give the Marine a rifle with a fixed sight so set as to enable him to take full advantage of the flat trajectory of the 30-06 cartridge at short ranges: that is, so that he may aim at the middle of a standing man at any range from point blank to 400 yards and hit the figure somewhere between the knees and the head and this with no change in point of aim. This valuable condition will exist if the battlesight is calibrated or zeroed at 250 yards. This idea is of primary importance and must be firmly established in the minds of everyone in the range party. The improvement of qualification shooting at 200 and 300 yards rapid fire, which requires that the battle sight be used, is a secondary consideration and of secondary importance. For reasons to be set forth later, this idea, too, must be held to by every one connected with the calibration of the sights. The qualification course is primary training for combat firing and, in the Marine Corps system, the rapid fire stages are a means to the end that all Marines have a rifle which, if handled in accordance with the principles of rifle marksmanship, will produce hits on a moving target in battle.

Practice on moving targets is a phase of the fighting man's training that is beyond the scope of the qualification course, and is too seldom covered in training schedules. However, qualification practice is definitely and demonstrably a prerequisite of successful musketry or combat firing. The requirement that the battlesight be used in part of the qualification course is a good one—it familiarizes the Marine with the sight best adapted to rapid yet accurate fire at moving targets. No sight made is better than a winged "Buckhorn" for bringing down a racing deer at 200 paces, nor is there a better sight for bringing down a bandit running from tree to tree at 200 yards than the battlesight. But even for the most expert of marksmen to perform these feats their rifles must be "zeroed." Every Marine's rifle is supposed to be and can be "zeroed" for such feats when he leaves the range after each year's practice: whether or not he has the marksmanship ability to successfully perform these feats is another matter.

In every discussion we have heard regarding the faults of our marksmanship training methods we have listened to many a story and many a criticism. But let us examine the facts. Maybe the fault does not lie in the system. Let us examine the facts as established by 1,284 Marines firing tests on one of the Marine Corps Rifle Ranges. These 1,284 Marines were run-of-the-mine, with a qualification average of about 87% with about 15% Expert Riflemen. The rifles used were the men's regular equipment. The tests were made to examine into the "hitting probabilities" of the rifles as well as the "hitting probabilities" of the men.

The results of the tests are these: the theoretical probability of any given rifle, as brought to the rifle range, of being able to hit a man-size target at 250 yards, considering the aiming point to be the symmetrical center of the figure, the battlesight elevation to be as found on the rifle, the windage to be correctly set, the mean radius of dispersion to be 2 inches, is, as has been demonstrated by the actual firing of 1,284 rifles, but 46.8% on the prone target of twelve inches height; 73.5% on a kneeling target of thirty inches height, and 87.9% on a standing target of 56 inches height. The answer, of course, is that the battlesights are incorrectly zeroed.

Upon the completion of two weeks' rifle practice the sights on the rifles in the hands of the men are presumed to be 100% effective, but actually are about 95% effective on prone targets and 99% effective on kneeling targets due to undetected and uncorrected personnel errors.

Having examined into the "hitting probability" of the average rifle, let us see what the average Marine can do against a man size target at 200 and 300 yards, given a rifle in good condition with a battlesight calibrated at exactly 250 yards and prepared for the test by five days' preliminary qualification practice.

The men, firing in the standing position at 200 yards, obtain about 45% hits when the E-Kn target rises ver-

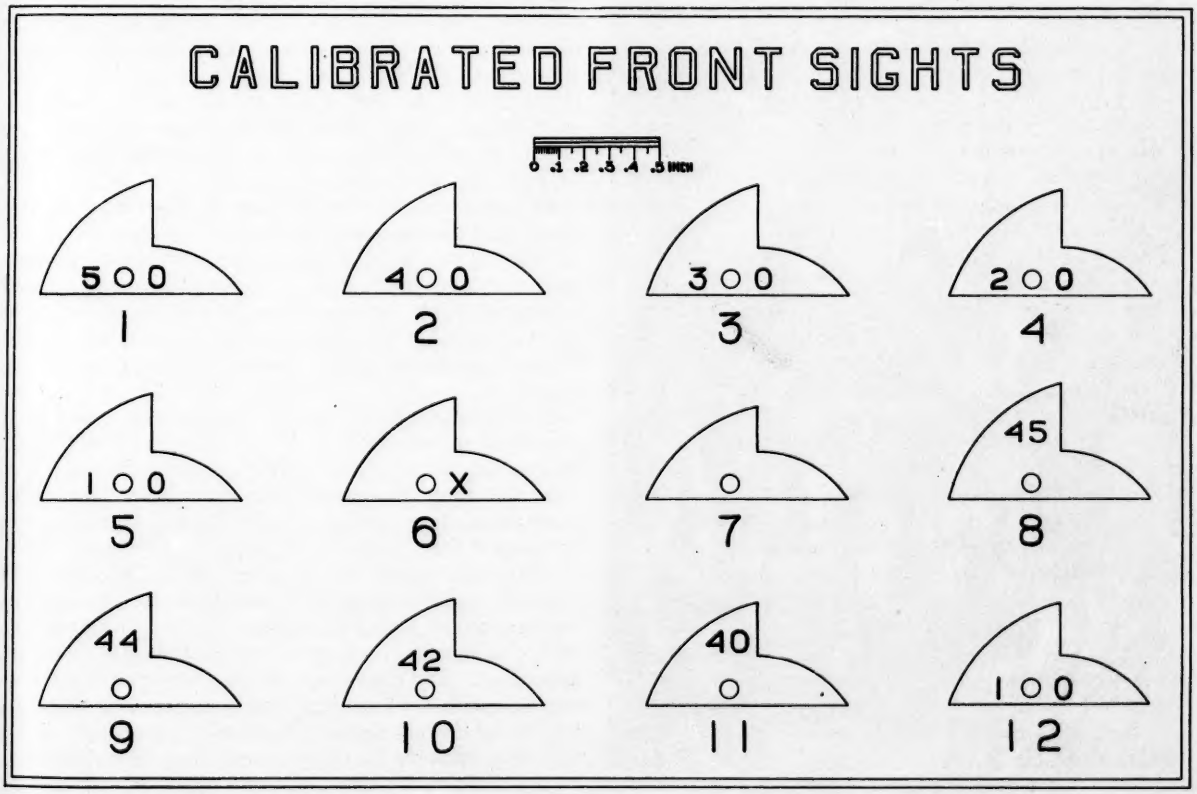
tically and is then held stationary for five seconds; 25% when the target moves laterally at a slow run during an exposure interval of 5 seconds. From the sitting position at 200 yards they get 65% hits on the rising targets and 40% hits on the moving targets. At 300 yards in the prone position the men obtain 75% hits on the rising targets and 50% hits on the moving targets; in the sitting position, 40% hits on the rising targets and 25% on the moving targets. In all tests, the targets were exposed for not over 5 seconds per shot, the battlesight, previously calibrated and corrected, is used, and either the hasty sling or none at all permitted in the prone and sitting positions. These rules were established to enable the Marine to fire under conditions which would simulate the delivery of a quick shot at an enemy in a jungle combat.

Taking into consideration the probability of the average Marine having the marksmanship ability to hit a man target at 200 yards and the probability of a given rifle having the necessary corrected battlesight which would enable the man to hit the target if he did get off a good shot, the probability of the average Marine with the average rifle of hitting a standing man target at 200 is but 39% when the target is stationary and 22% when the target is moving. An expert shot would have a 21% chance of hitting a prone man. Inasmuch as we are talking about rifle sights we will not bring in personal equations and attempt to show what would happen to our "hitting probability" figures if confirmation of our calculations were left up to some young man who would find himself two jumps ahead of a nervous prostration when he found himself thrown into a gun fight. At any rate, the lad will have two strikes against him when he goes to bat—unless the old battlesight is kept zeroed.

A 60% chance of missing an easy shot is a sad state of affairs but it is something that can be corrected and is being corrected every time a man goes to the rifle range. There is where he is given a real opportunity to get the dope and to make the necessary corrections.

Tests with over 400 Marines show that if the rifle sights are correctly calibrated, the hitting probability of these men is increased from 39% on rising targets and 22% on moving targets to 90% and 75% respectively in from three to six days of practice if the combat practice is supplementary to qualification. A test with 74 Marines of a battleship detachment indicated that from ten to twelve shooting days are necessary to bring a group up to the 90% and 75% standard if the practice is not supplementary to qualification practice. But even with all this time, the results will not be as evenly distributed among the whole as when the practice supplements qualification practice: there is more danger of more men becoming gun shy and finally getting to the state where they don't hit anything but the sky.

The reason for this condition is that correct sighting and aiming and trigger squeeze are even more important in quick fire at moving targets in the field than in known distance firing on fixed targets. A slight disregard of the principles of rifle marksmanship in qualification firing results in 4's, 3's or 2's, whereas on the



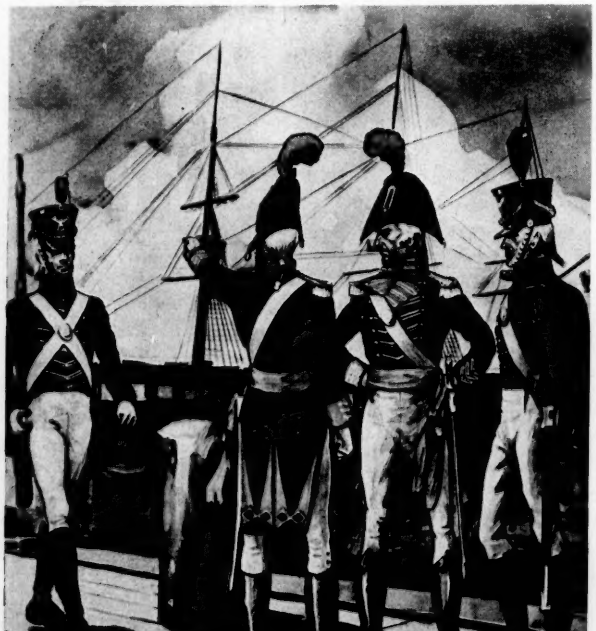
HAVE YOU PAID YOUR DUES TO THE ASSOCIATION?

man target the result is a miss, the direction and magnitude, and therefore the cause, of which the shooter will never know. Very few men can learn how nor long remember how to apply the essential principles of marksmanship in firing on a field target without practice at known distances on bulls-eye targets. There are a few men who can shoot well at any time without practice, but the average man requires several days a year to keep himself up to par. There is no one who does not improve with practice. We have met no one who can shoot on moving targets even moderately well without formal preparatory training and conditioning.

Granting the desirability of accurate and exact calibration as a first step towards improving our field firing, how may this work be done?

There are several systems used on the various rifle ranges, but for one hundred per cent effectiveness, the following system has proved to be practically foolproof if the range party is carefully organized.

First of all, the shooters must be so organized that they will always work with the same coaches. When a ship's detachment or a company goes on the range where coaches of a permanent range detachment are not available, the non-commissioned officers and the best shots of the group must be set aside and specially instructed in their duties. Then, to each coach is assigned as many shooters as there are to be relays in the firing party. This assignment should remain fixed up until preliminary day so that coaches may keep track of the results of their work and make improvements whenever desirable.



THE OLD MARINE CORPS—1810

The schedule must be arranged to permit calibration firings, which will be described later, on the first and second days of practice.

The armorers must be instructed, if the system is new to them, so that they will know what is planned and so arrange their work as to enable them to make the necessary changes the same day they are called for.

Before going on the range to fire the calibration tests, be certain that the coaches and armorers are entirely familiar with the calibrated front sights and how variations in height of sight vary the placement of the centers of impact on the target.

Plate I shows 12 different sizes and markings met with in front sights issued to the ranges. An examination of any large number of front sights will bring out duplicates of the sights shown in the Plate.

The primary size of front sight is called a "Standard" or an "X." The sight is .40 inch high from the bottom of the sight to the tip of the upper edge. Such a sight is shown in figure 6. This height of sight, combined with a standard height of the shoulders of the battlesight on the rear sight slide cap is designed to give to the rifle a certain "zero." On the Springfield, as issued from the arsenal, this zero is 547 yards; as altered by the Armory of the Marine Corps Depot of Supplies, 250 yards. This difference is obtained, of course, by cutting down the height of the shoulders of the battlesight as manufactured by the arsenal.

Naturally, few rifles shoot at their theoretical zero. At 250 yards, a rifle with a Marine Corps altered sight may shoot 30 inches high or low without a single defect being apparent in the rifle, and is due to a number of causes, principally the fit of the stock. This is where the work of the range party becomes important.

In order to bring the battlesight zero of a rifle to 250 yards, either the rear sight on top of the slide cap must be raised or lowered or the front sight must be raised or lowered. It is much easier and more practical to change the front sight.

To make possible the shifting of the center of impact to the aiming point of shot groups that fall above the aiming point at 250 yards, the rifle being equipped with standard sights, a series of specially manufactured calibrated sights are available to range parties. The series, in the various forms met with, is shown in the Plate in all figures except number 7, which is a homemade job.

The sights vary in height by increments of one hundredth of an inch from 41 hundredths of an inch to 45 hundredths of an inch. Figures 1 to 5 in the Plate show the exact appearance of a series manufactured by a commercial gunsmith. At the bottom of each blade is stamped the figures 50, 40, 30, 20 and 10, which indicate that the sights are, in order, .450, .440, .430, .420 and .410 inches in height. A standard sight .40 inch in height may be stamped with an "X," as in figure 6, a .40 as in figure 11 or, as is more often the case, left unmarked. The reason for this is that when a sight is required with a height less than standard, it is obtained by cutting down a standard sight to the required height, and any previous marking would then be misleading.

(Continued on page 37)

CARDED

Some Qualifications for Leadership and Command

BRIG. GEN. WM. P. UPSHUR

SOME years ago while a student at the Naval War College I was required, along with other members of my class, to submit an essay on "The Inter-Relation in War between National Policy, National Strategy and Command." The authorities, with the best intentions, had prescribed that the essay should be submitted in two parts as the previous year's class had complained of lack of time to do the necessary work. As a result, we were confronted with the preparation of two essays instead of one, and the following extract from mine leaves much to be desired. It is offered because it may contain some worth-while information regarding leadership and command.

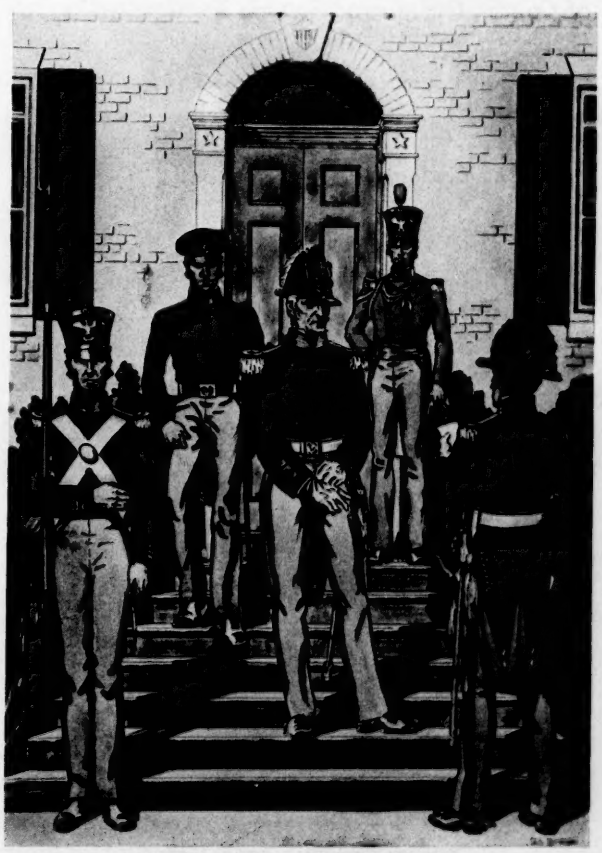
Command is a function limited primarily to officers. The supreme commander shoulders the heaviest burden of responsibility, but junior officers in turn also feel its heavy weight. In time of danger every man looks to his officer to note his reaction to the emergency. His own reaction — his conduct and bearing — will reflect that of his superior. All during his service it is the duty of every officer to develop strength of character; to examine himself to determine what characteristics he lacks and to study the lives of great leaders to learn what qualities were responsible for their success. Basically, it should be remembered that AN ORGANIZATION ALWAYS REFLECTS THE CHARACTER OF ITS OFFICERS. The Commander should therefore set a high example of efficiency and attention to duty and in times of stress and danger he must be the embodiment of courage, resourcefulness, and tenacity of purpose. Baudry says: "As the officers are, so will the men be. * * * When the spark of faith, hope, or enthusiasm informs the voice, the gesture, and the eye of a fighting leader, whatever be his rank, the spirit of the whole group under his command instantly flames up in response."

A brief review of the characteristics of some of the world's great captains will permit a summation of the qualities which should be possessed by those who aspire to follow in their footsteps.

ALEXANDER was a profound student of Homer, whose works he studied to gain knowledge of the conduct of war. He was gifted with extraordinary activity and rare determination. He recognized the value of saving time. He had tenacity of purpose, and in all of his campaigns observed the principles of the offensive, objective, superiority, economy of force, surprise, and simplicity. He had physical vigor and manly presence. He possessed great prestige and was beloved by his men.

CAESAR: One of the translators of Caesar's Commentaries has well defined his many remarkable qualities: "He had, moreover, all the qualities which go to make a good general: prudence, coolness, activity, boldness, a mind fertile in resources, a sure and clear sight which covered the general features of the vastest project and comprehended all its details, a wise restlessness which made him feel that HE HAD DONE NOTHING SO LONG AS THERE REMAINED ANYTHING TO DO, a courage to surmount all obstacles, a great understanding of men, the art of making himself loved and respected by his soldiers." War on the Sea—Darrieus.

NAPOLEON, great war emperor of the French, was first of all a trained soldier and the successful master of strategy and tactics. He was a profound student of the campaigns of Alexander, Hannibal, Caesar, Gustavus Adolphus, and Frederick. He was bold, courageous, resourceful, and possessed the genius of leadership and an inspiring personality. He was beloved by his men with whom he mingled freely about their camp fires, or led in battle when he considered his presence necessary. He was a keen student of human nature and psychology, and his active mind permitted him to take advantage of weak

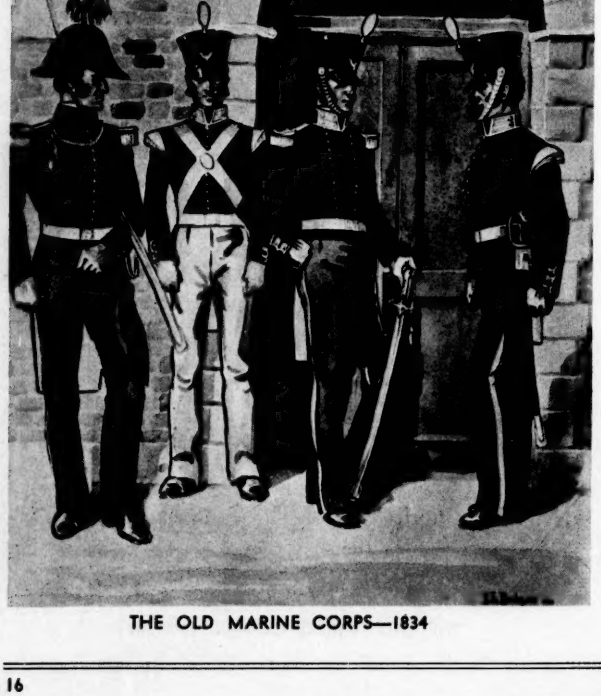


THE OLD MARINE CORPS—1820-1859

characteristics of his opponents, or to outguess them in their dispositions and movements. He was tireless, energetic, and active, and possessed bodily vigor and endurance to a remarkable degree.

NELSON had in an outstanding and generous measure most of the desirable qualities of a superlative leader, plus a personal magnetism which won and held the devotion and affection of his officers and men alike. He was a profound student of his profession, and a faultless master of naval strategy and tactics. He was bold, active, possessed keen intuition, and to the highest degree the courage to assume responsibility. He had great tenacity of purpose, promptness of decision, patience and perseverance. Like Caesar, he felt that he had accomplished nothing so long as there remained anything to do. He was the embodiment of the sea power of his country during his lifetime, and today he remains secure as the greatest naval officer produced by any race since the days of Yi-Sun.

LEE. The Commander-in-Chief of the armies of the Southern Confederacy is generally regarded as one of the outstanding soldiers produced by the Anglo Saxon race. He was a great strategist, bold in maneuver and audacious in the execution of his well conceived plans. He was a keen student of his opponents, and was able with uncanny ability to anticipate their action. His fine character was strengthened by strong religious belief. He had a noble and inspiring presence, and the uttermost love and devotion of his men. Mr. Benjamin Hill of Georgia thus beautifully sums up Lee's outstanding characteristics: "He was a foe without hate, a friend without treachery, a soldier without cruelty, and a victim without murmuring. He was a public officer without vices, a private citizen without wrong, a neighbor without reproach, a Christian without hypocrisy, and a man without guilt. He was Caesar without his ambition, Frederick without his tyranny, Napoleon without his selfishness, and Washington without his reward. He was as obedient to authority as a servant and royal in authority as a king. He was as gentle as a woman in life, pure and modest as a virgin in thought, watchful as a Roman Vestal, submissive to law as Socrates, and grand in battle as Achilles."



THE OLD MARINE CORPS—1834

JACKSON, like other great soldiers, was a profound student of his profession. He carried with him in every campaign a copy of Napoleon's Maxims of War, and he applied them with brilliant genius. Morally and physically he was absolutely fearless. He possessed an iron will and inflexibility of purpose. He was the incarnation of untiring energy and supreme activity, both of brain and body. Henderson says: "With all his gentleness there was much of the old Berserker about Stonewall Jackson, not indeed the lust for blood, but the longing to do doughtily and die bravely, as best becomes a man. His nature was essentially aggressive." He was patient, eminently cautions, careful and painstaking. He was bold and audacious, and when fully informed, did not hesitate to risk his all in a single throw of the dice with Fate. He was a stern disciplinarian, but eminently just, and he had that charm of personality, humaneness and lovable character that gained and held the admiration and devotion of his men. He was not only keeply religious, but also imparted this characteristic to his men, so that, like Cromwell's famous "Ironsides," there was a wholehearted fire and enthusiasm in battle that made them redoubtable opponents. He never issued an order that his men believed impossible of accomplishment; if they initially failed, they believed themselves at fault and not their general.

Consideration of the outstanding characteristics of these great leaders shows that all of them had many attributes so similar in their nature as to make quite clear the cause for their success. These include: audacity, aggressiveness, courage, coolness, determination, activity, boldness, resourcefulness, far-sightedness, fixity of purpose, wise restlessness, understanding of men, devotion to subordinates, energy, intuition, patience, perserverance, subordination and loyalty, watchfulness, caution, justness and humaneness, and in some cases deep religious conviction. Of special importance was their knowledge of the profession of arms, gained by long and intensive study of other great captains, and their familiarity with military history. All possessed manly presence, personality, and bodily and mental vigor.

The success of such men as Paul Jones, Farragut, Dewey, Grant, Sherman, Sheridan, and Pershing is, in consequence, not hard to explain. The accomplishments of each of them can easily be accounted for by applying to each, as a measure, the attributes of mind and of character previously stated.

It comes only to a few among many to exercise high

(*Continued on page 77*)

HAVE YOU PAID YOUR DUES TO THE ASSOCIATION?

Antiaircraft Protection for Our Naval Bases

FIRST LIEUT. WALLACE M. NELSON, *U. S. Marine Corps*

OUR warships have a new skyline—a fillagree of antiaircraft guns; a lacy profile from a distance —the Navy's web for enemy flyers. Our warships need the protection of antiaircraft guns; that is accepted and provided for. Our warships carry planes and aircraft carriers mother a brood of them. But planes are not enough. We mount antiaircraft guns to protect our ships from aerial attack and to free our planes for offensive action.

In recent years, even months, great progress in long range bombers has been a striking development. An examination of what that means is in order. Our oceans are now become shrunk. Our naval bases, yards, and facilities bordering our oceans are vulnerable to enemy planes from enemy lands and outlying bases.

The Navy needs antiaircraft protection for all of its bases. A key base is worth more than a battleship—it could conceivably be worth a fleet. Our navy is only as strong as its weakest key base and a naval base without antiaircraft protection would certainly be weak.

Our naval bases are tremendously important. In event of war, our fleets could not operate long without them. It is conceivable that the loss of a vital base at a critical time could cost a dozen battleships. It is hardly necessary to dwell on the necessity of protecting our naval bases. Yet, since this is a point on which this discussion revolves, an example may be in order. Our fleet has been operating defensively in friendly waters. They have finally been drawn out and a fleet action has ensued. Both fleets are badly punished and many ships in urgent need of extensive repairs before again being in condition for further operations. The enemy launches a huge aerial armada of long range bombers at the place where these repairs must be effected. The available places are not many. It is quite easy to see that if the air attack were successful, as it could well be, our whole position would be greatly jeopardized. A delay in time of battle has often determined the outcome of the war.

Captain R. K. Turner, U. S. Navy, in a lecture on Naval Strategy which he delivered before a recent class of the Marine Corps Schools, stated: "Since naval vessels cannot long remain at sea, the total time that they can operate in a given area, neglecting interference from the enemy, depends on the distance to their bases. If they are to be safe while in port, *their bases must be reasonably secure against all forms of attack*. . . . .

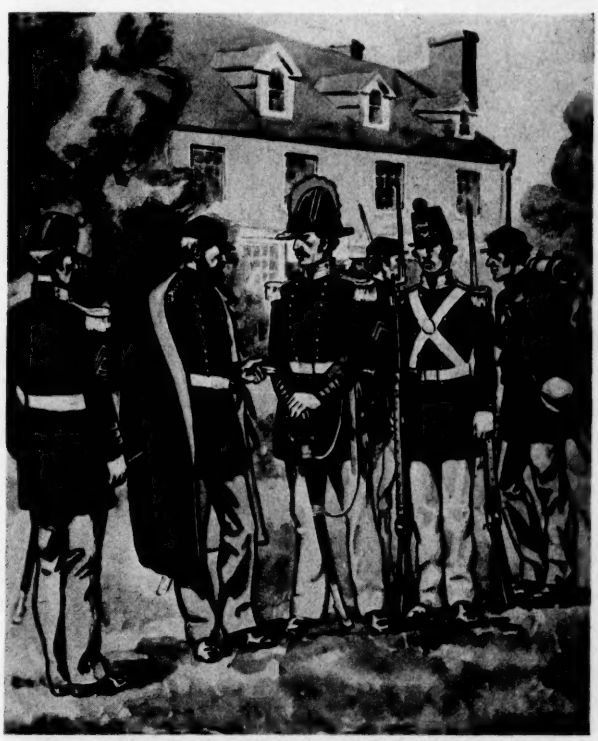
"Thus we may conclude that the successful strategic employment of the fleet depends first of all on the availability of vessels suitable in design and adequate in number, and second *upon bases* appropriately located, *and having adequate strength* and resources." (Italics are mine.)

Let us grant then that our naval bases are in urgent need of antiaircraft protection, as urgently as are our warships.

It has been fully demonstrated that modern aviation cannot be stopped by modern aviation. Aviation is offensive and only incidentally defensive through damage inflicted on the offensive. Time and space factors militate against the defensive employment of aviation in the protection of a definite area. All of which means that antiaircraft artillery is the defensive key for active protection from hostile aviation.

It also has been well illustrated that modern antiaircraft artillery can stop modern aviation. Efficient modern batteries are rated from 75 to 100 per cent efficient in protecting vital areas.

Major T. R. Phillips, U. S. A., in his article, "Preview of Armageddon," published recently in the Saturday Evening Post, states: "In the early days of the war, Insurgent communiqués indicated that 70 per cent



THE OLD MARINE CORPS—1859

of the Government planes destroyed were victims of German antiaircraft artillery. So effective is it that a whole spy system is used to trace the location of the guns and warn Government aviators to avoid them. . . .

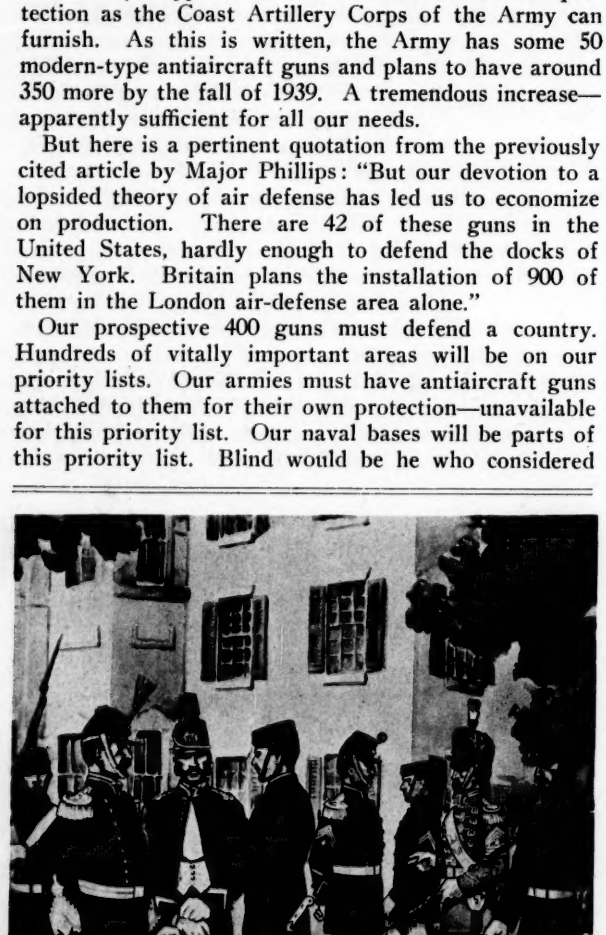
"What of the United States? We have in our three-inch antiaircraft gun and American-built robot fire director, the equal, if not the superior, of any gun and director in the world."

The present problem then—which appears capable of solution—is to keep antiaircraft artillery abreast or ahead of new developments in aviation.

At present our naval bases are protected from aerial attack by friendly aircraft, antiaircraft guns of ships which may happen to be in the harbor and such protection as the Coast Artillery Corps of the Army can furnish. As this is written, the Army has some 50 modern-type antiaircraft guns and plans to have around 350 more by the fall of 1939. A tremendous increase—apparently sufficient for all our needs.

But here is a pertinent quotation from the previously cited article by Major Phillips: "But our devotion to a lopsided theory of air defense has led us to economize on production. There are 42 of these guns in the United States, hardly enough to defend the docks of New York. Britain plans the installation of 900 of them in the London air-defense area alone."

Our prospective 400 guns must defend a country. Hundreds of vitally important areas will be on our priority lists. Our armies must have antiaircraft guns attached to them for their own protection—unavailable for this priority list. Our naval bases will be parts of this priority list. Blind would be he who considered that our naval bases are properly protected from aerial attack, or have any prospect of so being in the near future.



THE OLD MARINE CORPS—1875

Who will furnish this needed protection, the Army or the Navy? A discussion of various advantages and disadvantages would seem in order.

First the Army. The Army, as represented by the Coast Artillery, is charged with antiaircraft protection of the United States. It is well qualified for the protection of our naval bases in that the protection of a naval base from aerial attack in nowise differs from the protection of any other vital area with which the army has to deal, save, perhaps, that the setup would be modified by the customary water area adjacent to a naval base. The Coast Artillery is possessed of modern materiel and specialized personnel and from a technical viewpoint is most satisfactory.

However, the Army needs its Coast Artillery (referring primarily to the antiaircraft branch) in its own operations and in time of war it is apparent that priorities would be a constant question. Antiaircraft artillery is never ample. In time of stress, when the Navy would demand antiaircraft protection, would the Army have more important priorities—as they considered them? Would the pressure of public opinion force the Army to use antiaircraft artillery in defense of large cities rather than strategical and vital naval bases? These are debatable questions.

But it is obvious, not debatable, who would control antiaircraft protection as provided by the Navy. The Navy is a very complete organization which is well capable of absorbing additional functions. The Navy has its own air arm, and its own landing forces. It can operate for intervals on its own, with subsequent backing by the army when applicable to the special case. The Navy has the technical qualifications to maintain its own antiaircraft protection. It does so aboard ship, and shore installations, though somewhat of a different problem, are quite akin as regards materiel and specialized personnel. If the Navy maintained its own antiaircraft protection of its naval bases it would control this protection. It would be where the Navy wanted it when the Navy wanted it. It would be identified with the protection of naval bases and would not be considered otherwise.

The antiaircraft protection of a naval base must always be under centralized control. The Commandant of the naval base would probably exercise this control through a member of his staff. Under this control would come everything pertaining to antiaircraft protection, both passive and active. Naturally it would be most advantageous to the controlling officer to have these protective agencies "speak the same language." This situation is much more probable if the Navy takes on the antiaircraft protection of its own naval bases.

What agency of the Navy could best provide and maintain this antiaircraft protection of naval bases—the line of the Navy or the Marine Corps? In the event of war the line of the Navy would be required to man the ships of the Navy. They are trained for warfare on water, fighting from the deck of a ship.

(*Continued on page* 40)

• Marine Corps Selections •

DEPARTMENT OF THE NAVY

Washington, D. C., 3 October, 1938.

From: The Secretary of the Navy.
To: Major General Louis McC. Little, U.S. Marine Corps.
Subject: Precept convening selection board for promotion to brigadier general and colonel, U.S. Marine Corps, and recommending an officer for appointment as head of the Paymaster's Department, U.S. Marine Corps.

1. A selection board is hereby appointed, consisting of yourself as president and the following additional members:

Rear Admiral Andrew C. Pickens, U.S. Navy.

Rear Admiral William R. Furlong, U.S. Navy.

Brigadier General Randolph C. Berkeley, U.S. Marine Corps.

Brigadier General John C. Beaumont, U.S. Marine Corps.

Brigadier General William P. Upshur, U.S. Marine Corps.

Lieutenant Colonel Donald Curtis, U.S. Marine Corps, will act as recorder. No other general officers are available and legally eligible for membership on this board.

2. The board is hereby ordered to convene at the Navy Department, Washington, D. C., on 10 October, 1938, at ten o'clock a.m., or as soon thereafter as may be practicable.

3. The board will be furnished by the Secretary of the Navy with the names of all officers in the grade of colonel who are eligible for consideration for promotion to the grade of brigadier general, and with the records other than medical of all such officers. From among those officers the board shall recommend for promotion not exceeding four (4) which is hereby certified to be the estimated number of vacancies which will occur in the grade of brigadier general in the Marine Corps before the end of the next succeeding fiscal year in excess of the number of officers now on the promotion list for that grade.

4. The board will be furnished by the Secretary of the Navy with the names of all the officers of the rank of colonel who are eligible for consideration for appointment as head of a staff department of the Marine Corps. From among those officers the board shall recommend for appointment as head of the Paymaster's Department one officer. Should the board recommend for promotion to brigadier general of the line a colonel who is now serving as head of any Staff Department or whose name in on the eligible list for appointment as head of any Staff Department, the board shall recommend an additional officer of the grade of colonel for appointment as head of such Staff Department.

5. The board will be furnished by the Secretary of the Navy with the names of all officers in the grade of lieutenant colonel who are eligible for consideration for promotion to the grade of colonel, and with the records other than medical of all such officers. From among those officers the board shall recommend for promotion not exceeding eighteen (18) which is hereby certified to be the estimated number of vacancies which will occur in the grade of colonel in the Marine Corps before the end of the next succeeding fiscal year in excess of the number of officers now on the promotion list for that grade.

6. The board will be furnished by the Secretary of the Navy with the names of all officers in the grade of lieutenant colonel who are eligible for consideration for adjudgment as fitted for promotion. From among those officers, less those who are selected as best fitted for promotion, the board shall designate those officers whom the board adjudges fitted for promotion.

7. The board shall be governed by the act of June 13, 1938 (Pub. No. 703, 75th Cong.) which establishes "a merit system for promotion by selection" in the line of the Navy and Marine Corps. The following instructions contained in that act will be particularly observed by the board in the discharge of its duties, viz:

(a) The board shall carefully consider the case of

BRIGADIER GENERAL CLAYTON B. VOGEL
The Adjutant and Inspector, U. S. Marine Corps

every officer whose name is furnished it by the Secretary of the Navy. (Sec. 10 (a.).)

(b) Officers recommended for promotion by the board under the provisions of paragraphs 3 and 5 of this precept shall be those officers "whom it considers best fitted for promotion." (Sec. 9 (a).)

(c) The status of having previously failed of selection as best fitted shall not be considered as prejudicial to an officer with respect to his qualifications, his fitness for the naval service, or his eligibility for selection. (Sec. 9 (a).)

The board shall also observe the following instructions relating to selection for promotion in the Marine Corps, contained in the Act of Congress approved May 29, 1934 (48 Stat. 811, 34 U.S. Code 667d), and continued in force by the aforesaid Act of June 23, 1938:

"That administrative staff duty performance by an officer under appointment or detail, and duty in aviation, or in any technical specialty, shall be given weight by the selection board in determining his fitness for promotion equal to that given to line duty equally well performed."

The board shall also observe the following instructions relating to selection for promotion in the Marine Corps of officers in the grade of colonel and lieutenant colonel detailed to assistant quartermaster and assistant paymaster duty only, contained in the Act of Congress approved July 28, 1937 (Pub. No. 218—75th Cong., 34 U.S. Code 632a):

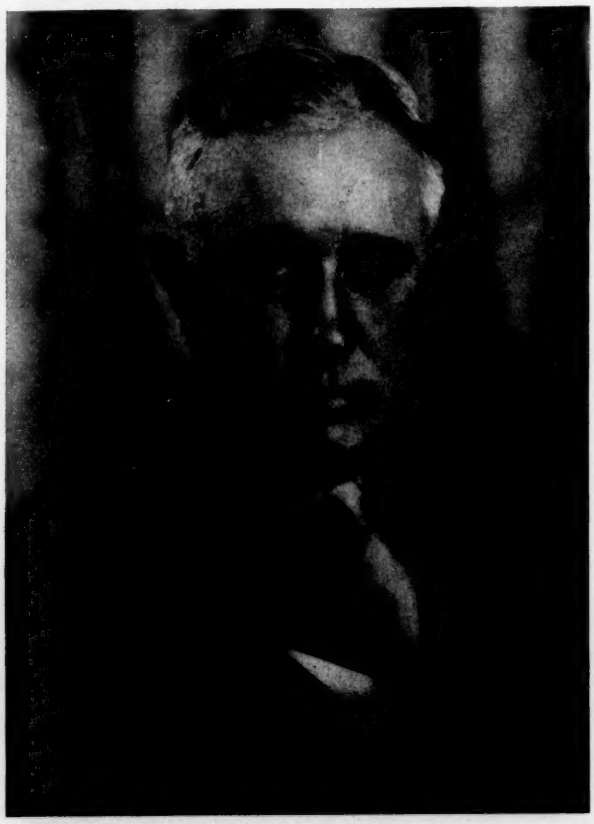
"That the recommendation of selection boards in the cases of officers assigned to such duty shall be based upon their comparative fitness to perform the duties prescribed for them."

8. The board is informed—

(a) that the law charges the Secretary of the Navy with the duty of determining what officers are not physically qualified before furnishing a selection board with the names of officers eligible for its consideration for promotion;

(b) that the physical fitness of such officers must, therefore, be assumed by virtue of the fact that their names have been furnished the board.

9. The restrictions under which officers formerly became ineligible for consideration upon attaining specified ages or completing stated periods of commissioned service, are omitted from the Act of June 23, 1938. Congress has thus enlarged the field of selection, vesting in duly constituted selection boards the exclusive jurisdiction to recommend according to their judgment the officers who are best fitted for promotion, subject only to prior determination of eligibility by the Secretary of the Navy.



COLONEL CALVIN B. MATTHEWS
U. S. Marine Corps

COLONEL HOLLAND M. SMITH
U. S. Marine Corps

10. No discretion is vested in the Secretary of the Navy or in any other person to prescribe a method of selection to be followed by a selection board, and any communication from any source which even remotely suggests that the board depart from the clear instructions prescribed by statute law is illegal. (Decision of the Secretary of the Navy, April 27, 1931, file EN/A17-31 (310422).)

11. The following oath or affirmation shall be administered to the recorder by the president of the board:

"You, Donald Curtis, do solemnly swear (or affirm) that you will keep a true record of the proceedings of this board."

The following oath or affirmation shall be administered by the recorder to the members of the board:

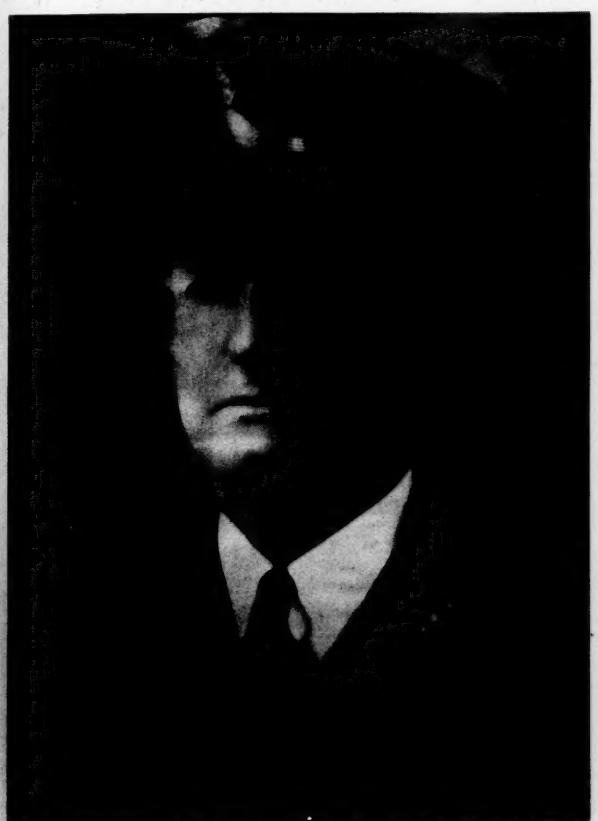
"You, and each of you, do solemnly swear (or affirm) that you will, without prejudice or partiality, and having in view both the special fitness of officers and the efficiency of the naval service, perform the duties imposed upon you as provided by the act of Congress approved June 23, 1938, entitled 'An Act to regulate the distribution, promotion, and retirement of officers of the line of the Navy, and for other purposes.'"

12. When the board has made the necessary decisions, it shall address a communication to the Secretary of the Navy stating separately the number of officers in each grade who have been agreed upon and will be recommended in the board's report as fitted or best fitted, respectively, to assume the duties of the next higher grade. The board will thereupon be furnished by the Secretary of the Navy with a statement, as directed by the President, giving the percentage, if any, of the officers adjudged fitted for promotion which shall be recommended for retention on the active list to meet the immediate requirements of the Navy.

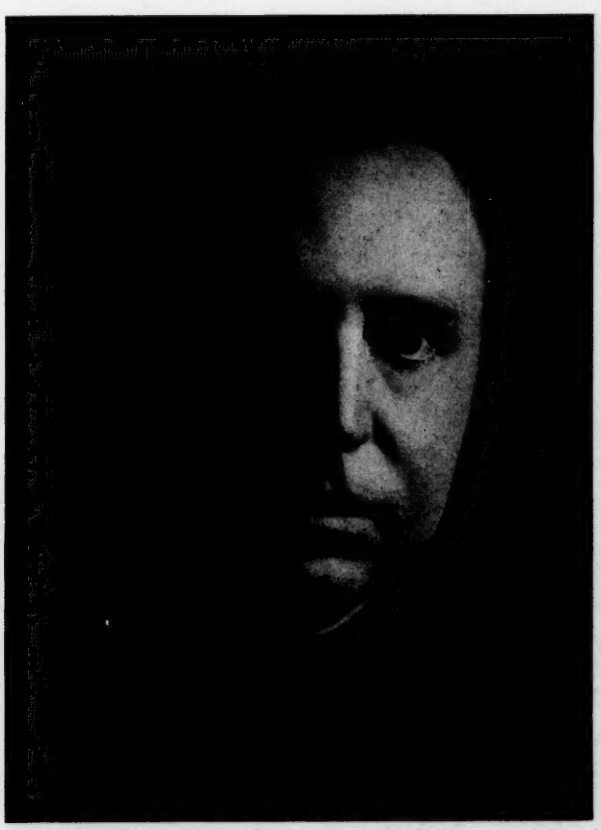
13. The proceedings of the board shall be conducted insofar as may be practicable in accordance with the provisions of Naval Courts and Boards.

14. The names of the officers recommended as fitted or best fitted, respectively, to assume the duties of the next higher grade, or for appointment as head of a staff department, or for retention on the active list, shall be entered in handwriting. The report of the board shall be signed by all the members, and shall contain the following certificate:

"We, the undersigned, do hereby certify that we have carefully considered the case of every officer whose name was furnished the board by the Secretary of the Navy, and that, in the opinion of at least four of the members, the officers herein recommended as best fitted are the best fitted of all those under



COLONEL PHILIP S. TORREY
U. S. Marine Corps



COLONEL EDWARD A. OSTERMANN
U. S. Marine Corps

consideration to assume the duties of the next higher grade (except that the recommendation of the board in the cases of officers assigned to Assistant Quartermaster and Assistant Paymaster duty only is based upon their comparative fitness to perform the duties prescribed for them); that the officers herein adjudged fitted are fitted to assume the duties of the next higher grade; and that the officer recommended for appointment as head of the Paymaster's Department (and the officer recommended for appointment as the head of the ..... Department) is (in each case) the best fitted of all those under consideration to assume the duties of the office for which recommended (and that the officers recommended for retention on the active list are the best fitted for retention on the active list of the officers herein adjudged fitted to assume the duties of the next higher grade)."

15. The recommendations of the board shall be regarded by the members of the board and the recorder as confidential. Upon completion of its proceedings, but not before eleven full days have elapsed, including the date of the convening of the board, the board shall forward the record of its proceedings to the Judge Advocate General of the Navy.

CLAUDE A. SWANSON,
Secretary of the Navy.

The President has approved the report of the Marine Corps Selection Board, which has been in session at the Navy Department since October 10th, recommending the following officers for promotion and for appointment as heads of staff departments of the Corps:

For promotion to Brigadier General of the Line:

Colonel Clayton B. Vogel (now serving as Adjutant and Inspector of the Corps, with the rank of Brigadier General)
Colonel Calvin B. Matthews
Colonel Holland M. Smith
Colonel Philip H. Torrey

For appointment as head of the Adjutant and Inspector's Department, with the rank of Brigadier General:

Colonel Edward A. Ostermann
Colonel Julian C. Smith

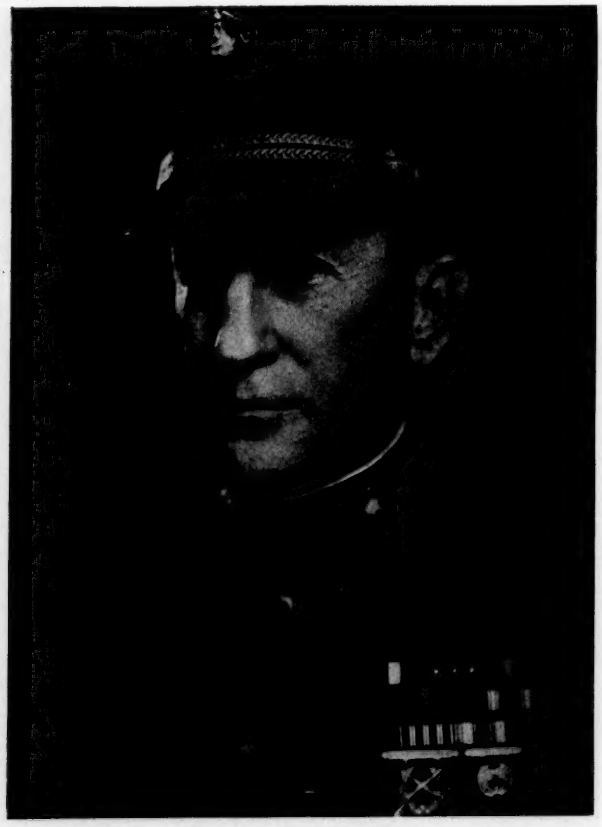
For appointment as head of the Paymaster's Department, with the rank of Brigadier General:

Colonel Harry Schmidt

For promotion to Colonel:

Lieutenant Colonel Marion B. Humphrey
Lieutenant Colonel Harold C. Pierce
Lieutenant Colonel Harry K. Pickett
Lieutenant Colonel James L. Underhill
Lieutenant Colonel Keller E. Rockey

(*Continued on page* 43)



COLONEL JULIAN S. SMITH
U. S. Marine Corps

COLONEL HARRY SCHMIDT
U. S. Marine Corps

CARDED

North China, 1937

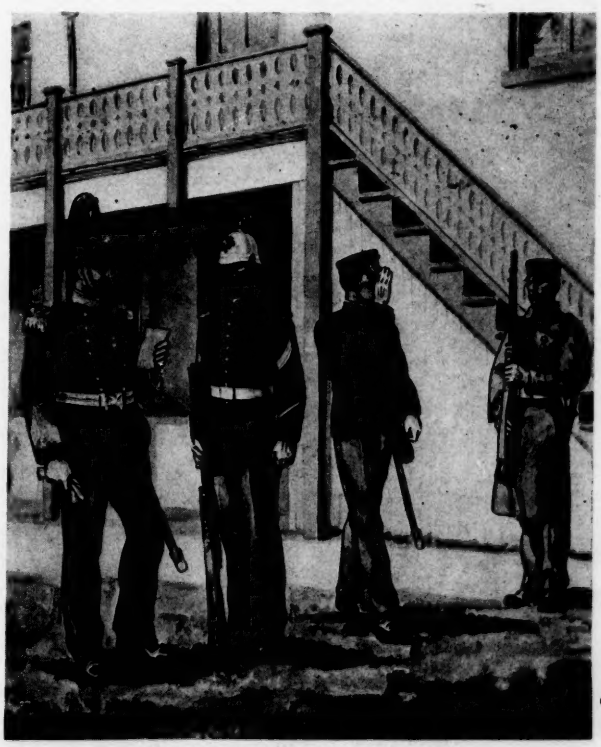
CAPTAIN SAMUEL B. GRIFFITH,
U. S. Marine Corps

ALTHOUGH the general success of Japanese Army operations in north China was due in large measure to the poor quality of resistance encountered, it is impossible, in reviewing the campaigns, to gainsay the fact that the achievements of the invaders were notable in many respects. As a framework for its southern advances the Imperial Army chose the railway network of Shantung, Shansi and Hopei provinces and along these corridors its columns moved southwards in three correlated drives against the supposedly highly fortified Lung-Hai railway. It was over this same ground that the Mongols pushed southwards some eight centuries ago. The objective of the Mongols then, like the Japanese objective of 1937, was to drive the northern Chinese government and its armies south of the Yellow River and thus to extend their hegemony from the deserts of Inner Mongolia across the north China plain to a southern frontier limited by a natural river barrier. A study of a topographical map of north China will indicate that this strategy was sound, as he who dominates the railways and the several strategic mountain passes which they pierce is in a position to control and disrupt the movements of any hostile troop columns.

The Japanese drives, distinguished by a degree of speed and striking power which came as a distinct shock to military authorities in Nanking, were well coordinated and indicated efficient staff work and careful planning. The supply of food, ammunition and gasoline; tractors, trucks, horses and carts; replacement aircraft and parts; troop transfers and the evacuation of casualties—all were carried out with an efficiency which bespeaks a high degree of organization. The present China campaign is an overseas operation and attended with the usual difficulties which beset all such large scale movements of men and materiel. The Japanese lines of communication from Kobe and Yokohama to units along the Lung-Hai stretch for well over a thousand miles. Transfers from steamer to rail carriage take place at seaports from whence men and supplies are carried on single track railways (highly vulnerable to guerilla attack) to their destinations. As some of the trackage is narrow gauge, a second transfer must frequently take place.

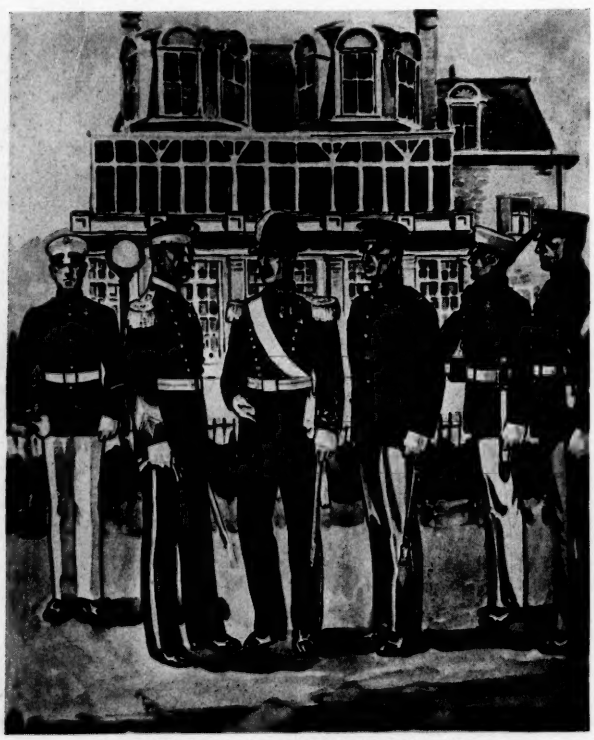
The solution of a supply problem of such magnitude is an achievement of which any modern army might well be proud. The maintenance of five separate operating forces and garrisons which aggregate well over a million men on fronts so far removed from home bases and from each other as are Manchuria (the Kwantung Army), Korea (the Korean garrison), south China, the Yangtze valley, and north China is a feat certainly unequalled in modern military history. Japanese lines of communication both on land and sea are spread out in a vast network many thousands of miles in length and find their only historical parallel in the long lines along which Ghenghis Khan's famous lieutenants Subatai and Ogotai conducted their operations.

The early results of the campaigns indicated a careful estimate of the situation from all angles and a complete knowledge of the capabilities of the northern Chinese Armies. The Japanese were equipped with the most up-to-date maps of China in existence. The most detailed and accurate map of north China that can be purchased today was prepared and printed in Japan during the summer of 1937 and was on sale about the time hostilities broke out at Lu Kou Ch'iao. As far as the "essential elements of enemy information" went, the Japanese deductions were correct. In the completeness and thoroughness of its plans the operations section responsible for mapping out the campaigns in North China was not excelled by those organs of the general staff responsible for intelligence and supply. Japanese plans were well coordinated and flexible. Pressure was applied simultaneously at a number of points along widely separated fronts. Maximum use was made of aircraft artillery, and tanks. Useless infantry casualties were kept to a minimum and the morale of the army was further heightened by the swift tempo of victories which were the results of a carefully planned strategy. The Japanese never threw themselves at a stone wall if they could walk around it. Every one of their north China operations is a beautiful example of flanking



BARRACKS DUTY UNIFORM—1900

and turning strategy. The south Shansi campaign of the past year is a case in point. A holding attack (which had plenty of drive behind it) hit the front of a fifty-mile Chinese line in two or three places. At the same time, three columns (totalling two divisions) moved across mountain ranges into the rear of the right flank of the Chinese. This worked out so well that the mere threat of such power in its rear was too much for the Shansi army of well over 100,000 men. Subject to an unrelenting pressure on its front and utterly unable to cope with the threat developing in its rear, the army lost its identity as a fighting force and the troops, disorganized, fled into the hills. The conclusion that Japanese service of supply, their strategical conceptions, and estimates of Chinese capabilities, were sound and worthy of study is inescapable. Results speak for themselves. In north China, large forces had occupied every seaport, every mile of railway, every point of strategic importance after the first eleven months of warfare. These forces have been successfully provisioned and maintained, transfers have been effected, replacements have arrived, casualties have been evacuated. Every imaginable form of transport has been used. Railways, motor truck (over highways certainly unworthy of the name), cart, pack animals, coolie carriers, camels, were all pressed into service as necessary. To supply forces nominally occupying an area as large as the five north China provinces is a formidable task. When there is a war thrown in on the side the problem becomes all the more difficult of solution. The Japanese, however, have apparently solved it, and if there is a weak link in the samurai armor it is certainly not here.



MARINE CORPS DRESS UNIFORMS—1916

Weaknesses there have been in the structure of every military organization. No army has been perfect. We may reasonably suppose that there are weaknesses in the structure of the Japanese army, and that some of them have been brought to light in the recent north China campaigns. A fundamental and perhaps irremediable weak link is found in the clashing political ideas of various groups within the army. This essay is too limited to go into the politics within the Japanese Army in any detail—suffice it to say that cliques, whose ideas of a suitable policy for the Army and Empire are antagonistic, do exist. A detailed historical review of politics within the Japanese army and the Japanese army in politics would be necessary to present the case clearly, and to anyone interested in pursuing the subject—a very interesting one—the author recommends "Militarism and Fascism in Japan," an objective book by two Soviet writers, Tanin and Yohan; T. A. Bisson's newest book "Japan in China," an authoritative review of current hostilities on the continent; and "Japan's Feet of Clay" by Freda Utley. The rift, as has been said, is due to differing views as to the proper national policy.[1]

One group of army officers—at present dominant in counsels of state—is led by several well-known generals. Itagaki, formerly in command of the 5th Division on the north China front and more recently War Minister, is identified with this group. In general, these officers represent that school which favors the westward push through Mongolia—an extension of the Manchurian flank to parallel the Trans-Siberian railway. These officers have all, at some time or another, served with the Kwantung Army. I can do no better than to quote from Bisson's "Japan in China." In an attempt to clarify the position of the Kwantung army he writes: "The Kwantung Army's future relationship with the province of Shansi has not been made clear. The problem involves a certain amount of rivalry with the Japanese armies in north China under the command of General Terauchi. Both groups participated in the invasion of Shansi, but the title of the Kwantung Army, whose divisions entered the province from the north, does not seem entirely clear. Its entrance into T'ai Yuan was made possible only by the assistance rendered by the Japanese forces from Hopei without which it might have pounded vainly at the Hsin K'ou range for some time longer. There can be no doubt that the Kwantung Army will surrender its tutelage of the three new inner Mongolian regimes, or allow them to be merged with the provisional government established at Peiping only with the greatest reluctance. Inner Mongolia is considered a natural extension of the Kwantung Army's exclusive sphere of jurisdiction in Manchuokuo." It is a known fact that the Kwantung Army strenuously opposed the Shanghai intervention in 1932 as well as the present campaign in Central China on the

(*Continued on page* 46)

[1]We will neglect entirely the differing views on national policy which are expressed by Army and Navy spokesmen. This cleavage between the armed services is fundamental. Apologists for the Navy favor a southward expansion while the army in general is committed to expansion, in one form or another, on the Asiatic mainland. As the whole subject is involved, is bound up with Japanese clan history, and with the development of industry and overseas shipping, it can only be mentioned in passing.

XUM

"The Road to the Rear"

CAPTAIN HAROLD C. ROBERTS, *U. S. Marines*

(A lecture presented during the Medical Field Service Course for Naval Medical and Dental Officers at the Marine Corps Schools)

●

BY WAY of introducing myself, I offer this excuse for a Marine Officer speaking to the Navy Medical Corps on the subject of the evacuation of battle casualties.

From the outbreak of the World War I served as a naval hospital corpsman and company aid man. We left for France on the first trip of the *U.S.S. Henderson*, from which we landed at St. Nazaire on June 27, 1917. I served continuously with the 5th Regiment of Marines until 14 September, 1918, when I was wounded in the St. Mihiel drive and did not again return to the front. I was returned to the United States in the hospital ship *Mercy*, after the Armistice. There I was discharged from the Navy and returned to my neglected education. I was commissioned a Second Lieutenant in the Marine Corps in 1923.

Between March 15th and November 11th, 1918, the 4th Brigade of Marines, Second Division, A.E.F. France, was maintained at the strength of 258 officers and 8,211 enlisted men. Between these dates the 4th Brigade fought in eight battles and suffered narly 12,000 battle casualties.

During those eight months 4,500 sick (largely gastro-intestinal and respiratory diseases), many hundreds of German prisoners and Allied wounded in addition to the above 11,968 battle casualties were treated, tagged and evacuated by a total of 331 officers and men of the Navy Medical Department. They were attached to the 5th and 6th Regiments of Marines, who composed the 4th Brigade of Marines.

Of this total of 331 Navy Medical Department who served in the actual conflict in France, 13 were killed and 110 were wounded or gassed. They received for their services over seven hundred decorations or awards or 211 per cent were decorated.

The average number of Navy Medical Department attached to the 4th Brigade at one time was 135 men. Their 123 battle casualties occurred during the five months between 7 June and 11 November, 1918. Their monthly casualties averaged 24.6. Therefore, the annual casualty rate for the Navy Medical Department in combat was 219 per cent.

Until the brigade went to the front at Verdun the Regimental Medical Department personnel consisted of 7-medical officers, 3-dental surgeons, and 48-hospital corpsmen. One hospital corpsman was assigned to each company of about 250 men. While at the Verdun front, when hospital corpsmen were available, it was found advisable to assign from two to five per company. Then the ideal arrangement of assigning one hospital corpsman per platoon was possible.

In the Verdun Sector the Allied trenches had been held for years and were much improved. The French, whom we relieved, had built elaborate dugouts and had improved the cellars of destroyed houses for use as *"Postes des Secours,"* or aid stations. These stations were directly in the front lines and were occupied by their battalion surgeons, "Medical Majors." However, our company aid men relieved them and our battalion aid stations were established about a mile to the rear.

The company to which I was attached at the time took over the trenches running through "Chatillon-Sur-Les-Cotes." Their "Post de Secour" was directly in the town through which the front line trenches ran. I was conducted by the guide to the "Medecin Major" and his assistant or "Medecin Capitaine." They knew but little English and my French was poor, but we progressed admirably in German! After we had shared a bottle of "vin ordinaire" they took me through the "Poste." It had gas proof doors, chimneys for ventilation, wood stoves, was lighted by candles and had at least twelve feet of stone and brick debris overhead. There was no water. In one large room there was a dressing table

MARINE CORPS—1916-1919

and twelve chicken wire bunks furnished with mattresses salvaged from the town. In the rear were three more rooms. One contained six bunks and the other two rooms, occupied by the doctors, were most comfortably furnished with salvaged feather beds, upholstered chairs, rugs and mahogany tables.

Here in the Verdun Sector efforts were made to augment the stretcher-bearer force, which was composed of the two regimental bands only. No uniformity was maintained in the brigade. Some battalions assigned details from line troops. The bands were divided between the battalions holding the lines and the Regimental aid stations, which were always over a mile to the rear of the front lines. Wounded were littered back directly from the front lines. It was not until much later that a definite detailed order assigning stretcher-bearers from the line troops was effected.

This was a quiet sector to test the mettle of the Americans at the front. There were relatively few casualties during those two months—17 March to May 14th. The company aid men accompanied the night patrols repairing and constructing barbed wire defenses and reconnaissance patrols. Occasionally they brought in wounded and at rare times there were artillery shell wounds.

Well over half the casualties were caused by one gas attack. 300 Marines were billeted in wooden shacks in a ravine two miles to the rear of the front line. These men were in reserve and while asleep at four a. m. April 13th, they were bombarded with mustard gas and high explosive shells for about four hours. 291 gas casualties were evacuated. 33 deaths occurred, mostly resulting from secondary pneumonia. The greater majority of these men never recovered sufficiently to return to regular duty. According to the gas officer of the 6th Regiment at the time, the causes of the casualties were:

(a) Shells bursting in shacks—60 cases.
(b) Respirators not put on in time—25 cases.
(c) Premature removal of respirators—75 cases.
(d) Disobedience of orders—75 cases.
(e) Insufficient clothing for change—60 cases.
(f) Heroic removal of respirator to facilitate evacuation of others and saving of lives—2 cases.

During the month of Jnue 1918 in Belleau Woods near Chateau-Thierry, the 4th Brigade suffered its greatest number of casualties. During that month there were 1,062 battle deaths and 3,615 non-fatal casualties. Two hospital corpsmen were assigned to each company for this series of attacks and often more than one company was entirely without first-aid men, for here, like the Marines, the hospital corpsmen and bandsmen had their heaviest casualties. As men were hit they were dressed, tagged and "located" by the company aid men, who tied a piece of bandage to a nearby bush or bayonet thrust into the ground.

This "location" was of little help for, generally speaking, there were no stretcher-bearers to remove the severly wounded from the field where they fell. At times the bandsmen were unable to clear the battalion aid stations and get their stretcher loads back to the ambulance collecting stations or to the regimental aid station, much less clear the battlefield. This was particularly arduous and dangerous work and the band suffered so many casualties that their number was found insufficient and their services were considered more necessary to the morale of the troops when behind the lines. Orders were then issued prohibiting their further use as stretcher-bearers and men from the line of each company were detailed to replace them. Fortunately, when the casualties were greatest, prisoners were plentiful and they were all utilized in evacuating the severely wounded in make-shift litters from the spot where they were dressed by the company aid men to the battalion aid stations. Some slightly wounded and all the sick were made to carry stretchers. Had we taken no prisoners or had our attacks been less successful, the great majority of the wounded would not have been moved for days. As it was I have seen MANY severely wounded who lay where they were hit for 48 to 72 hours before they could be reached or were found and dressed. Meanwhile they had been exposed to cold nights, and hot days, thirst. shock and infection; not mentioning the pain and fear. But by this time the company aid men were all administering anti-tetanus serum and morphine in quarter grain units on the field. They did what they could at the time to prevent shock, realizing the shortage of litter bearers and the probability of many hours passing before the severely wounded could be evacuated.

After the heroic but unsuccessful eastward attack of the third battalion, Fifth Regiment, from "Lucy-le-Bocage" across the wheat fields on the sixth of June, a number of wounded were left to die on the field near the western edge of Belleau Woods. There they were found by the Second

(*Continued on page 53*)

MARINE CORPS UNIFORM—1928

CARDED

Rifle Marksmanship Training

MAJOR JACOB LIENHARD, U.S.M.C.

THE scope of this training is clearly enunciated in the Basic Field Manuals, extracts from which I shall quote. "Military rifle training is divided into two parts. Rifle marksmanship (known distance firing), in which the men are taught, individually, to be good shots; and Musketry, in which they learn to act as a team under the leadership of squad, section and platoon leaders to obtain the maximum fire effect on an enemy.

Rifle marksmanship and musketry are inseparably related. Neither one alone will win battles without undue losses. In all training on the rifle range it must be borne in mind that the ultimate object is to qualify for a team whose accurate fire can be controlled, directed and distributed in battle by a leader.

Combat practice firing is that form of training wherein a tactical unit solves a problem involving a tactical situation in which service ammunition is fired at an enemy represented by suitable targets. The purpose of which is to further instruct leaders in the control of their units in battle, and the soldier in the performance of his duties in combat, as a member of a fighting team so as to secure the maximum fire efficiency."

Now let us briefly review the system of training in the Marine Corps during the past 30 years.

About thirty years ago, individual rifle marksmanship training was conducted in a rather haphazard manner, if at all. Each post or station employed its own methods, or conducted no training whatever. At some ranges the recruit was ordered on the firing line amid loud cursing by the instructor, who would throw ten rounds of ammunition at him, with the admonition that he had better hit the target or else keep going the next time he went on liberty.

This in many cases constituted the entire year's training. There were however a few posts that made a serious effort to improve the marksmanship ability of their commands. Marksmanship training was probably first seriously undertaken, by the Corps as a whole about 1910, at which time standard training methods were developed and adopted throughout the Corps. From that time on, marksmanship training was considered of paramount importance.

The required course of fire has been changed several times, going from a skirmish run to moving targets and other changes such as reducing the range from 1,000 yards to 600 yards, increasing the range for rapid fire, etc. Each change was considered an improvement, except that I cannot agree that the abolishing of the skirmish run was an improvement. It was the only class of fire that more nearly approximated combat firing. I believe that an individual course embodying some such fire would be of value today.

About 1912 the present U. S. Rifle was adopted as the arm for the Corps, supplanting the Krag Jorgeson, a caliber .30 rifle with a blunt nosed bullet weighing 220 grains. This new rifle had many improvements to commend it, chief among them a flatter trajectory, greater penetration, increased accuracy, more rapid refilling of the magazine, shorter in overall length, better sights for target shooting, a more accurate wind gauge and several other improvements.

On the other hand, the sights, both front and rear, on this new rifle were not as sturdy. Even now about 20 per cent of the rifles in use require sight repairs annually.

The peep sight was adopted, which was more accurate for target shooting, but of doubtful value for combat firing. True there was a battle sight but was set at about 530 yards, which when used for marksmanship training required the shooter to aim low. In battle it tended to miss the enemy, thereby making it a fine sight for them.

The Krag had an open sight, of a type used on hunting rifles, easily set in multiples of 100 yards, not as accurate for target shooting but excellent for combat firing. Musketry and combat firing were not considered a necessary part of our training with the rifle; however, when Marines took the field in Haiti and the Dominican Republic, its value was appreciated and training centers were established in those countries. Musketry and combat firing became a part of the annual training of all rifle units. This training I believe was of great value and paid dividends when Marines entered combat during the World War. Shortly after the World War the Corps adopted the No. 10 sights, both front and rear, probably for the purpose of correcting some of the faults of the No. 6 sights developed during combat, the theory being that a battle target could be readily picked up through the larger No. 10 peep sight. This new sight also had a battle sight which was lowered from 530 yards to 400 yards, which is more nearly correct, but was not required to be used in firing the marksmanship course and was promptly forgotten. The mere mention of a battle sight was considered a military sin and many of us were ridiculed for advocating its use. As it worked out this No. 10 sight did not possess the inherent excellent target practice qualities of the No. 6 sights and was discarded and the No. 6 readopted.

In Combat, men were expected to see battle targets through the small peep sight, which first had to be set for the designated range. To set our present rear sight for either range or deflection is extremely difficult, even in broad daylight on the rifle range, and

(*Continued on page 60*)

HAVE YOU PAID YOUR DUES TO THE ASSOCIATION?

Marine Corps Communication

CAPTAIN JOHN F. HOUGH

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(1) The First Signal Company will install, maintain, and operate the division signal communication system as follows:

(1) The Command Post Message Center will open . . . . .

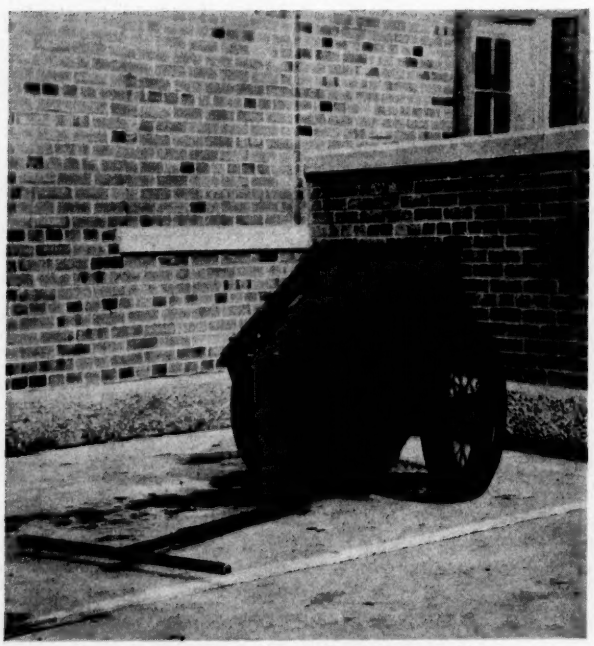
How many times have you read the above in an annex to a field order and what did it mean to you? Probably you didn't realize it, but that is the mission of all signal units . . . . . to install, maintain, and operate communication systems.

(2) Communications are as old as war itself and have been used, to more or less advantage, by savages as well as civilized military forces. Often the wrong impression is gained of communications and why they are valuable. They are only valuable as a means to an end—the same as artillery, aviation, and other supporting units. They may be compared to the nerve system of the human body in that they transmit the messages of the Unit Commander to his various sub-divisions in the same way that the brain controls the movements of the arms and legs. It is sufficient for the higher Unit Commander to understand communications sufficiently to obtain the maximum use of them without going into details. The signal units of today are well trained, and better results are obtained if they are allowed to work unhindered. The smart Unit Commander of today appreciates communications and demands they perform their duties efficiently so that he has the maximum amount of control over subordinate units at all times. Speed of transmission of orders and reports are a great factor in helping the Unit Commander to not only control but plan his actions. The side gaining the earliest knowledge of the situation certainly has a decided edge in the evaluation of the enmy and formulation of plans.

It is the business of the signal personnel to know how to send messages most quickly and by what method. A good signal unit overlooks no means of transmitting a message and is proficient in radio, telephone, flags, runner, and lights. Many times the terrain is the determining factor, and, at other times, the traffic loads on the various agencies determines the method to be selected. Sometimes an important message is sent by several means to insure safe delivery.

The maneuvers of the Fleet Marine Force have brought a greater understanding of the needs for communications and of the troubles of the signal personnel in performing their duties.

Personnel— Officers, in numbers available, are trained at the Army Signal School, Fort Monmouth, N. J., before assignment to the Marine Corps Units. This is an excellent course, especially in



NEW TYPE COMMUNICATION CART

LAYING FIELD WIRE

XUM

its training for field work. Officers assigned to signal duty should not be given extra assignments unless others are not available, as to train and operate an efficient signal unit requires all the time available. It must be realized that, although the personnel in any unit is all too few, the duties of the different sections are so varied that their training and supervision requires considerable ability and lots of time to gain efficiency. The Communication Officer, because of his closeness to the Commanding Officer and his staff, can become a most valuable assistant.

The enlisted personnel are, with few exceptions, outstanding both as Marines and technicians. The non-commissioned officers are required to go to school to learn theory and practical work so that they may function in the field. By rotation through different duties they eventually become grounded in all types of signal communications. Because of the steps gone through to become efficient in communications, it is generally three or four years at the least before a man becomes well qualified. For the above reasons it would seem advisable to have a much larger complement for signal troops than at present. The present requirements for active units plus those going to schools and on detached duty for training cause Headquarters Marine Corps to be pretty hard pressed at times to suitably fill all billets. In case of sudden expansion, a large complement would greatly simplify matters as it would insure a few trained men being assigned all units. It is believed that it takes longer to train efficient signal troops than any other of the specialist branches of the Marine Corps.

The present non-commissioned officers are, in many cases, well prepared and could act as communication officers in subordinate units. It must be borne in mind that in many instances a non-commissioned officer of signal troops will be put in places of great responsibility, such as with a unit on detached duty. In such a case, he must be well trained and efficient to be of benefit to the Unit Commander.

There is a very distinct need at present for more ranks in the signal troops. The grades of corporal and sergeant could well be double that at present. The knowledge required and worth to the Marine Corps is much more than the money value, but this small increase in rank goes a long way in making the good man more satisfied in feeling that he is repaid for his efforts in going to school and making the Corps more efficient.

At present the senior signal non-commissioned officers have not much chance of making warrant officer. There is a distinct need for this opportunity to be created for them for the following reasons:

(1) Personal incentive to excel is greatly increased,
(2) There are jobs for at least six of them at the following places:
  1 School at Quantico.
  1 School at San Diego.
  1 Signal Repair Shop.
  1 Shanghai, China.
  1 Peiping, China.
  1 Pool (general duty) where needed.
(3) Many of the present non-commissioned officers are young and ambitious, and moving them up when qualified would help the complement.
(4) They could be used as signal officers in subordinate units or as assistant communication officer in a Brigade or Force under actual conditions.

(3) *Training*—The following places are at present available for training enlisted personnel:
  (1) Navy Material School, Bellevue.
  (2) Fort Monmouth Army Signal School.
  (3) Telephone School First Signal.
  (4) Radio Operators School First Signal.
  (5) Radio Operators School Second Signal.
  (6) Radio Material School Second Signal.
  (7) I. C. School, Bellevue.
  (8) Automatic School, Chicago.
  (9) Aboard Navy Ships and at Navy Shore Stations.

Signal Troops do duty with the Fleet Marine Force, where they gain the highly essential field training with line units which is the main reason for their existence. They also do duty in China, where the Marines operate two big radio stations, one in Shanghai and the other in Peiping. At the present, smaller stations are operated at Tientsin and Chinwangtao. While radio is the main duty in China other training is carried on and telephone installations are operated at all stations. The China radio stations produce excellent operators and radio supervisors.

Two Naval Radio Stations, one on either coast of the

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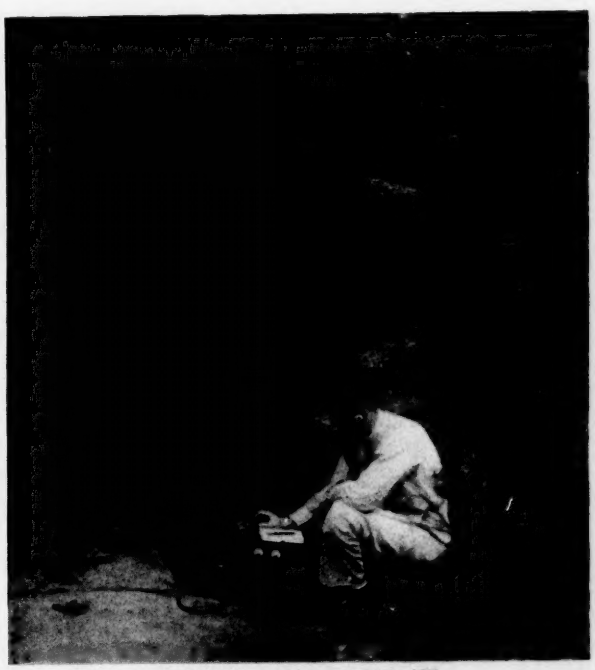


OPERATING FIELD RADIO SET

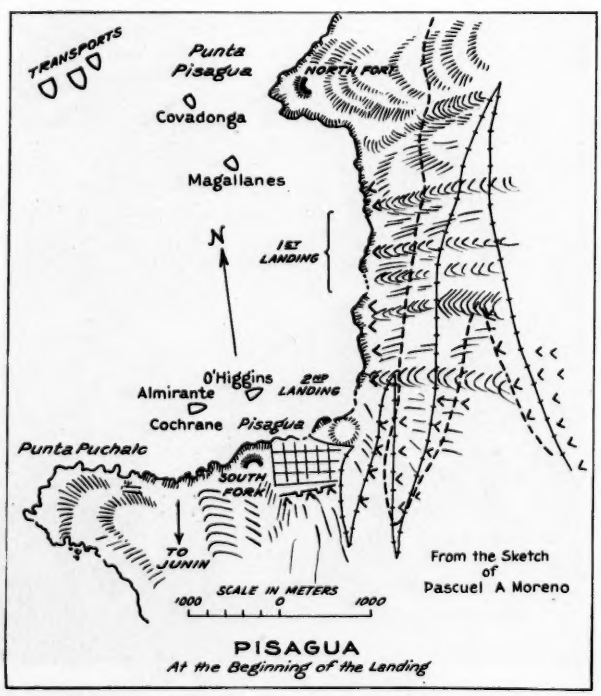
HAVE YOU PAID YOUR DUES TO THE ASSOCIATION?

The Second Conquest of Peru

FIRST LIEUTENANT JOHN A. BUTLER, *U.S.M.C.*

WITH events in the world today flashing a background of clashing empires, the war fifty-nine years ago between Chile and Peru, allied with Bolivia, seems relatively unimportant. One battleship of a modern fleet weighs more than did the combined navies of the contesting nations. Today's legions of marching men in China would simply smother the 40,000 Indians and Spaniards who fought in the narrow desert along the Pacific shore. No labor battalions preceded the mechanized forces and threw up roads across the waste land as in Ethiopia. No planes roared overhead in defiance, nor whined earthward in agony, as in Spain. It was elemental warfare fought without the benefits of those modern developments, lacking which no war can be successfully pursued now or in the future.

However, the importance of a war for purposes of military study need not rest in size nor modernity alone. If the war between Chile and Peru in 1879-81 is worth studying at all, it is simply because it so ably demonstrated the influence of sea power on the conduct of a struggle between coastal nations, the final decision of which was to lay with the invading landing forces. Its technical lessons, perhaps once of importance to the naval student, are outmoded and can be forgotten without danger except to historical background, but the lessons of fundamental strategy, those of commission and omission, are of such value as to make a brief review of the principal features of the war worth while even in the face of more stirring military realities now occurring in this war-battered world.



PISAGUA
At the Beginning of the Landing

In brief review, the war had its origin in causes which seem refreshing in the light of their clear immorality. There was no clouded issue: no democracy to be saved, no culture to be brought, no ideology to be combatted, no peoples to be redeemed. It was merely the question of which nation should hog all the new-found wealth in nitrates of the hitherto valueless, undisputed Atacama desert on the west coast of South America.

The alleged violation by Bolivia of a tax law covered by a treaty with Chile was sufficient to provide the necessary incident. On the 24th of January, 1879, the Chilean government ordered the occupation of Antofagasta, then a Bolivian port, and followed it up with an engagement with Bolivian forces at Calama on the 23d of March. Peru, bound to Bolivia by a secret treaty of defensive alliance, began war preparations. Chile promptly challenged the reason for the Peruvian precautions, and unsatisfied with the answer and with the measures taken, formally declared war on Peru on the 2d of April.

The physical geography of the two major belligerents dictated the strategy of the ensuing conflict. Both nations presented long reaches of coast line backed by a narrow plain, a great longitudinal mountain range, the towering Andes, and an unsettled, unknown "montaña" region to the east. Centers of population were distributed at those widely separated places along the coast where the river valleys came down to the Pacific. Communication between these cites was practically only by sea. Thus restricted, the whole military problem boiled itself down to command of the sea followed by landing operations at strategic points.

Bolivia, with a relatively short coast line, no Navy, and being militarily impotent, can be practically discounted except for her share in the allied defense against the first landing operations.

Numerically and technically superior afloat, Chile's freedom of naval operations in the first part of the war was limited by the lack of naval bases, by Rear Admiral Williams' uninspired handling of the fleet as a unit, and by the daring raids on Chilean commerce, transports and detached blockading vessels by the *Huascar,* Peruvian monitor. This ship, commanded by the enterprising Admiral Grau, was the sole remaining sea-going armored vessel of the Peruvian fleet after the battle off Iquiqui on 21 May, but her unchecked movements for three additional months up and down the coast spread alarm in Chilean coastal cities, caused abandonment of the blockade of Iquiqui, and finally forced the Chilean fleet home for reorganization and overhaul. Single-handed, her daring movements had checkmated the Chilean designs of invasion! But on the 8th of October her brilliant, defensive

cruise abruptly ended. Finally awakened to some semblance of coordinated effort, two Chilean squadrons neatly trapped the *Huascar* off Angamos Point. Badly battered by the heavy artillery of the *Almirante Cochrane Blanco Encalada* at distances varying from 3,000 yards to a cable's length, the *Huascar* struck her colors and yielded.

That moment marked the beginning of the second conquest of Peru.

The Landing at Pisagua

Unchallenged command of the sea was now Chile's and she quickly made plans to harvest in full the opportunity. Special troops went into training for the coming amphibian operations. Additional transports were chartered and special flat lighters were lashed to the sides of the ships, bottoms outboard, lines made ready for running. Her blockade of the Peruvian ports tightened and was extended as far north as Callao, port of entry to Lima, capital of the nation.

Antofagasta was chosen as the first jump-off port and 9,400 troops and 14 ships were assembled there. The choice was wisely made. Ideal conditions for embarkation purposes existed in the harbor and the port was located in the very wings of the theatre of intended operations—a most important factor, considering the limited cruising radius of the Chilean fleet, the lack of fueling bases, and the crowded condition of the transports as well as their poor mechanical condition. Antofagasta, it will be recalled, was occupied by the Chilenos in the first act of the war.

According to General Erasmo Escala, commander of the force, the embarkation of 9,405 men and 853 horses was expeditiously and efficiently accomplished in two and one-half days over a bridge of lighters from the beach to the ships with the loss of but one animal; according to Peruvian sources, the embarkation was confused and hurried to such an extent that ambulances and other equipment were left ashore. A rapid survey of the distribution of troops aboard the men-of-war and the transports, as listed in General Escala's official report, reveals that the operation was not carefully planned, that carefully planned it miscarried, or that the physical capacities of the transports prevented a proper distribution of troops, equipment and animals. Whatever the reason, battalions were split up, artillery units were separated from their guns and cavalry troops from their horses.

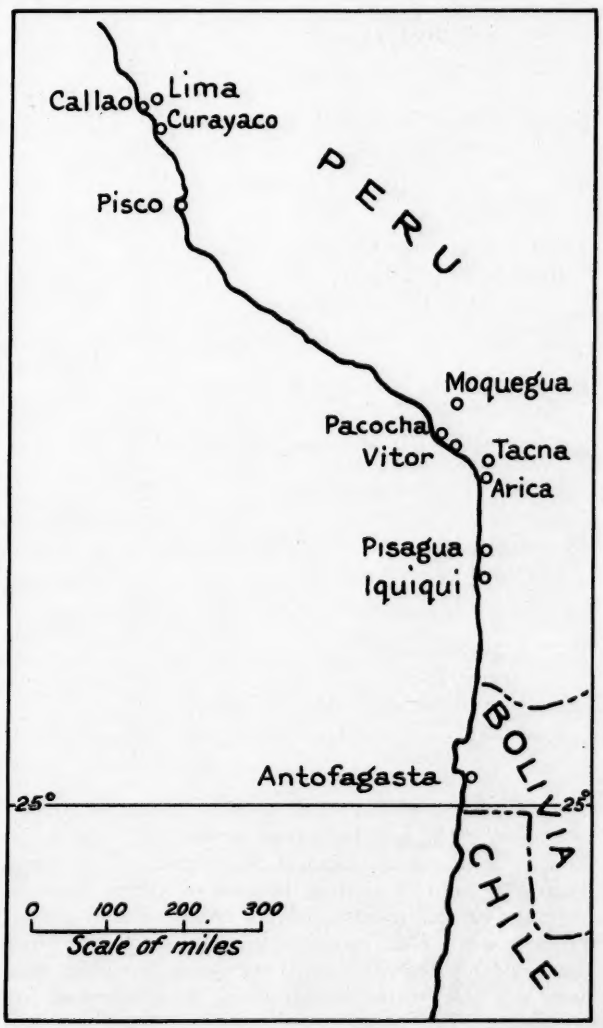
There is no escape from the fact that a landing operation begins when the first crate is carried aboard the transport and not when the landing boats grate on the sand and the men leap into the water for the dash ashore. There are too many historical examples of ill-starred landing-force ventures which began with poorly conceived and poorly executed embarkations to develop further the point. At Antofagasta, the embarkation was evidently both disorganized and faulty. All other things being equal, the Chileans placed themselves at a terrible initial disadvantage. However, all things were not equal, as subsequent events disclosed.

It was the 28th of October at 6:45 P.M. when the flotilla stood out of Antofagasta Harbor, and, as the long roll of the Pacific caught the *Almirante Cochrane*, flag guide, she turned northwest. Ahead lay the rendezvous 50 miles west of Pisagua, strategic port of the Province of Tarapacá and a strong spring-board towards the more important coastal city of Arica.

Three days later the ships straggled into position and were finally collected at the designated place. A series of mechanical breakdowns and other ill-sailing luck had cut the speed of the transports to about three knots. It was not an auspicious beginning, but General Escala wasted no further time. Calling a conference, he issued to his staff, commanding officers of the ships and battalion commanders his orders for the 2d of November:

"This fleet will arrive off the port of Pisagua and Junin Harbor at 4.00 A.M. on the 2nd of November in the order named. . . . . The *Itata* and the *Amazonas* will keep in column to the right of the transports and will be ready to move into Pisagua or to continue to Junin, according to signal.

"When two miles from the anchorage, the four warships, with the *Cochrane* as guide, will turn in towards the port and will attack and silence the enemy fortifications. The landing boats of the warships will be lowered



before commencing this movement and will be placed under command of the leading transport.

"The transports will heave to at this point but will remain in formation.

"While the warships are reconnoitering the bay and destroying the enemy's fortifications, the transports will prepare for the disembarkation of troops. All ladders and floats will be placed in position for expeditious disembarkation.

"All ships will send their boats in command of a lieutenant who will place himself under the orders of Captain Enrique Simpson, officer in charge of disembarkation.

"When directed by signal, the *Magallanes* will detach itself from the squadron and will join the *Amazonas* and *Itata.*

"Each ship will resume its proper place in formation after disembarking its troops.

"These instructions will be strictly obeyed.

"God be with you."

Erasmo Escala

First Division (will land at Junin)		
Naval Infantry	650	
Valparaiso Regiment	300	
Third Line Regiment	1100	
Mountain Battery	125	
	——	2175
Second Division (will land at Pisagua)		
Atacama Regiment	590	
Buin Regiment	1100	
Two Mountain Batteries	250	
	——	1940
Third Division (will land at Pisagua after the 2nd Division)		
Half of 2nd Line Regiment	500	
Fourth Line Regiment	900	
	——	1400
Fourth Division (will land at Pisagua after the 4th Division)		
Chacabuco Regiment	600	
Coquimbo Regiment	500	
Half of 2nd Line Regiment	450	
	——	1550
Special Division (will be landed wherever most practicable)		
Zapadores	400	
	——	400
Undesignated Forces		
Naval Artillery	800	
Three Batteries Field Artillery	375	
Cavalry	500	
Bulnes Regiment	500	
	——	2175

This order, issued on the eve of an important landing operation, could well have been written by General Escala as he sat in his cabin at Antofagasta. The sound tactical feature of exploiting the point of landing, crowned with the greater success, did not require a staff conference at sea. That is axiomatic. In short, the order contained no more thought, information nor plans than were available to the General at his headquarters at Antofagasta. The questions of number, disposition and equipment of the enemy, as well as the location of beaches, their width, depth and navigational dangers, were left unanswered for the morrow.

I have been unable to determine whether or not General Escala weighed the relative merits of complete surprise over intelligence and reached the decision that a direct plunge, without preliminary reconnaissance, promised the greater dividends. Certainly, the Allies expected an attack; Pisagua and Patillos were believed to be the most likely places. Yet they were obliged to maintain garrisons at several other widely separated ports. Even if they should have had 24 hours' warning, poor communications would have prevented them from moving any appreciable part of the 9,000 men scattered throughout the Province of Tarapacá into position for the defense of the threatened point.

Wisely, or unwisely, without any preliminary intelligence activities, the expeditionary force appeared off the headland at Pisagua just as dawn was breaking, almost two hours later than the time called for in the order. The sentries ashore spread the alarm and General Buendia was given ample time to post his men in their prepared positions. It was 900 against 9,000, but nature in creating the harbor of Pisagua had greatly aided the defense of the 900.

The harbor was approximately three miles wide at the entrance between Punta Pichalo on the south and Punta Pisagua on the north, and about one mile deep. Open to the northwest and west, the surf broke heavily on the rocky coast. The jagged steep cliff leaped upwards from the water's edge to a height of about 1,000 feet, and the railroad zigzagging down the rocky headland provided strongly etched lines of resistance.

There were four possible landing beaches. Three of these were north of the town of Pisagua, itself a mere collection of shacks on a narrow strip between the shoreline and the towering cliff. Average length of three of these beaches was about 200 yards, with but one beach as much as 400 yards long. All were flanked and backed by strong rocky positions.

And, in addition to the harbor's natural defensive strength, the Allies had erected two small forts, one on the north mounting one 100-pound R.M.L. gun and one just to the southwest of the town, which also mounted one 100-pounder.

Under capable direction the harbor should have been practically impregnable from frontal attack by sea. However, in fairness to General Buendia, allied commander, it must be remarked that he had arrived in Pisagua on the preceding day and his troops and equipment were poor by any standards. Had he been given troops and material as excellent as his terrain, perhaps Pisagua would yet be a Bolivian port.

At seven o'clock the attack began when the *Cochrane* opened with telling effect on the South Fort at 1,400 yards, followed almost immediately by the *O'Higgins.* Meanwhile, the *Magallanes* and *Covadonga* concentrated their efforts on the North Fort. By eight o'clock the fine team work had resulted in the complete reduction of both batteries and the operation was ready to enter the second phase.

(*Continued on page 64*)

HAVE YOU PAID YOUR DUES TO THE ASSOCIATION?

XUM

The Army Industrial College

MAJOR GILBERT D. HATFIELD,
U. S. Marine Corps

THIS writer believes that the average Marine officer has no conception of the function of the Industrial College, what it teaches, its mission, methods or application to the problems of the Navy and Marine Corps.

It is not a technical school for detailed instruction in quartermaster and supply work. That is provided for in the Quartermaster School in Philadelphia. It is not the place where one studies the grades of coffee and the components of a balanced ration. The Subsistence School, now discontinued, at Chicago taught food values, preparation of meals and similar subjects. Neither does the Industrial College teach the methods of supply in the field to tactical units nor the maintenance of troops in garrison.

It covers the broad field of industrial mobilization, the control of manufacture, the production of finished materials, the supply of raw materials, the coordination of all forms of transportation, the production and distribution of electric energy, the control of communications and publicity, business methods, economics, contractual procedure, strategic and critical materials, the economic and industrial conditions of other great powers. To the individual students, particularly line officers of all the armed services, it brings the broader conception of a nation at war, rather than the time honored picture of a nation in arms.

For centuries the military strength of a nation or cause was calculated on the number of soldiers and sailors that could be mustered and trained. In the days of primitive weapons and hand to hand fighting man power was the controlling factor. Since the Industrial Revolution, however, and the golden age of inventive genius, man power is a secondary consideration. With motorization and mechanization of fighting forces, long range weapons, the airplane, the radio, the tank, tractor and other mechanical and electrical devices the importance of men has lessened, while the necessity for natural resources and industrial ability has become paramount. Time has become a greater factor than ever and public opinion probably the greatest. No longer may men be led into war at the behest of a king, prince or noble. Particularly in democratic countries must the public at large, not only believe that war for a principle is the proper thing, but that it is the only possible solution for the immediate problem presented. For successful prosecution of a modern war there must be the popular support of all classes of citizens, not a war hysteria that throws untrained and ill equipped masses of men into battle, but a sober and well thought out support by deeds as well as by emotion, which must provide the soldier with equipment as good or better than that of the enemy. While it is true that the fighting forces receive the praise, the glory and the medals, it is also true that without the thought, labor and privations of those behind the lines there would be no victories to praise. For every man in uniform there are five persons in civilian occupations working to supply him with his food, clothing, munitions, transportation and medicines. It is with these great problems that the Industrial College deals, and it imparts the basic knowledge necessary to the proper functioning of the system of supply and maintenance of our nation during a major war effort. The needs of the civilian population are equally stressed with those of the members of the fighting forces, for those behind the lines are as essential to success as those in the front line.

It is common knowledge that the United States was totally unprepared in every respect for the World War, that our troops were transported in foreign bottoms, and upon arrival, depended upon the Allies for airplanes and artillery. The delay then was not fatal, but will we have allies in the next war and will we have two years' warning of what was bound to come? At our entry into the World War no one knew what would be required, where it was to be made or how it was to be distributed. This is what the Industrial College teaches.

While the psychology of the American people prohibits anything like complete preparedness for a major war, there are many steps that can, and must, be taken in peace time, particularly in the direction of industrial preparedness. These include surveys of manufacturing facilities, transportation and communications systems, electrical energy and distribution systems, locations of raw materials, labor supply, housing conditions, congestion of manufacturing areas, contractual procedure, allocations of facilities to the various services, priorities of delivery (including both raw material and finished product), training of officers, reserve officers and civilians in procurement problems, educational orders to manufacturers, drafts of legislation to further war aims, tentative organizational setups to put into effect such legislation, financing arrangements and preparation of manufacturing plans and specifications. All these involve thousands of details and require highly specialized knowledge, which must be obtained in advance of the emergency. The course at the Industrial College provides a guide and basic instruction for these steps. The graduates, generally speaking, are, in the Army, assigned to procurement planning duties, either in the office of the Assistant Secretary of War or in the offices

of their own arms or services, and in the field. In the Navy and Marine Corps they are assigned to the materiel war plans sections of their own bureaus or in the office of the Chief of Naval Operations. These assignments, especially where there are several changes in both services the same year, constitute a very happy arrangement, because the procurement planning officers of the various arms, services and bureaus are personally acquainted, and, through identical training are bound to speak the same language, and to have an understanding of each other's problems and methods.

It was due to the sad experiences of the World War that the National Defense Act of 1920 charged the Assistant Secretary of War with the responsibility of war time procurement and the planning therefor, in order that the competitive, secretive and individualistic procurement methods of the various supply arms and services could not again threaten the defeat of the nation as a whole.

The Army Industrial College evolved in the natural course of events to provide the Assistant Secretary with officers possessing the fundamental knowledge and training to assist him in carrying out the duties given him by law. At the beginning officers assigned to his office pursued haphazard courses of study and reading on their own initiative. A group of such officers finally decided that a service school should be established to train officers prior to their procurement planning assignments. Over a period of time and against great opposition the Industrial College became a reality.

By General Order No. 7 dated February 25, 1924, the Industrial College was officially established as follows:

"Establishment of the Army Industrial College.—1. A college to be known as The Army Industrial College, is hereby established for the purpose of training Army officers in the useful knowledge pertaining to the supervision of procurement of all military supplies in time of war and to the assurance of adequate provision for the mobilization of materiel and industrial organization essential to war-time needs.

"2. For the present such parts of the Munitions Building, located in Washington, D. C., as may be available and necessary will be assigned to its use.

"3. Direct supervision and control of The Army Industrial College are vested in the Assistant Secretary of War."

The first class consisted of nine officers of the supply arms and services, who took a five months' course, from February to June inclusive, 1924. The second class also consisted of supply officers exclusively, but the third class included four naval officers, one each from the line, the Supply Corps, Construction Corps and Medical Corps. The last five months' class, graduating in June, 1926, included several naval officers and the first officer of the Marine Corps to attend and graduate from this College. Beginning September, 1927, the course was increased to ten months' duration, the number of students was greatly increased, and officers of the strictly combatant arms were included for the first time. Each year the size of the class has expanded until the number is fixed at sixty-two for the year 1938-1939. Of these forty-nine are Army, eleven are Navy and one is from the Marine Corps. This year, due to shortage of officers throughout the Marine Corps, only one officer was assigned as a student at the Industrial College.

The standards set up by the Army for student assignment are high and are made from three groups of officers only, namely:

1. Graduates of the Army War College.
2. Graduates of the Command and General Staff School, with General Staff ability rating.
3. Officers of outstanding ability possessing special qualifications for Army Industrial College training.

In all cases officers selected must have a general rating not below "Excellent."

Originally the faculty consisted of five Army officers who had shown special qualifications for and interest in these duties. At present the faculty is composed of a director and seven instructors, one of whom is the executive officer. Six of these are Army officers, one is from the Navy and one is from the Marine Corps. Members of the faculty must be graduates of the Industrial College and should also be graduates of the Harvard School of Business Administration. Of the present faculty three have the latter qualification.

It has been the practice for several years to assign two outstanding Army graduates of the Industrial College to the Army War College as students the following year, and one to the Naval War College. This provides a healthy spirit of competition among the Army students and has been one reason that officers of the high type desired have eagerly sought duty as a student at the College. This writer believes, and has so recommended, that an additional vacancy at that College should be set aside for the Navy and Marine Corps graduates, to be competed for among themselves.

"The mission of the Army Industrial College is to train officers with a view to insuring: (a) Adequate knowledge of war-time needs in industrial organization and mobilization of materiel. (b) Understanding of the technique of supervising war-time procurement of military supplies."

It is possible that the College will eventually supply graduates for many of the following duties:

Office of the Assistant Secretary of War.

Offices of the Chiefs of the Supply Arms and Services, and in their Procurement Districts.

Instructors in General and Special Service Schools, including the Naval War College.

Perhaps one officer in each division of the War Department General Staff.

At least one officer in each Corps Area.

Assistant Military Attaches in all important countries.

And to furnish a trained nucleus for the formation of the war-time super-agencies that will necessarily have to be established under civilian control and direction.

Including the class graduated June 23, 1938, the number of graduates is as listed below:

Army, arms and services	593
Navy, line and staff	75
Marine Corps	21
Total	689

(Continued on page 71)

The Horse in Modern Military Organization

DONALD HITTLE,
Second Lieutenant, U.S.M.C.

THE Peking Horse Marines have passed in review for the last time, apparently joining the march of other mounted units into the realm of military history.

Without a doubt, the password to modern rearmament is mechanization, and greater speed, both on the ground and in the air. It is true that great strides have been made in post-war development of the light and heavy tanks, as well as combat cars. Tactical problems revolve largely around the use of tanks as the mobile units with which infantry attacks will be aided in future combat.

Although the stress of present day armament programs is upon greater mechanization, there are still reasons for suspecting that the horse is still to be figured as an important part of any future large scale military operation. It is quite improbable that the Marine Corps will have any use for highly organized cavalry detachments. A few mounted patrols in small wars will in all probability be the extent of Marine mounted units. Yet, as a well rounded military force, it would certainly do no harm to review the contemporary trends of horse cavalry.

Despite the fact that popular fancy and considerable military theory has relegated the horse and rider to the sole duty of escort and parade, practically every government is today paying particular attention to the development of cavalry.

To answer the charge that the World War sang the swan song of cavalry, the United States Cavalry School and Cavalry Association recently published a book, "Cavalry Combat," devoted entirely to accounts of cavalry actions in the great war. For the great majority who are of the general opinion that machine guns have eliminated the horse as a battlefield factor, it is interesting to note that the book contains over 500 pages of World War cavalry actions.

In a war that was supposed to have limited the use of horses to pulling field kitchens and artillery, we find that total cavalry forces consisted of 103 divisions, comprising approximately 700,000 men. Not limited to any particular region, cavalry rode into action from Tannenburg to Mons and from Amiens to Beersheba. And still, the most surprising thing about it all is the fact that such a large proportion of the cavalry actions were mounted engagements. It is true that on the Western Front, particularly after trench warfare became established, cavalry units participated largely in dismounted action. But the important fact is that time and again the horse was of deciding strategical value in enabling large bodies of troops to reach the field in a minimum of time and in a relatively fresh physical condition. not fatigued and frayed by the endless hours of marching under heavy packs.

When evaluating the use of cavalry in the World War, there will always be two schools of thought regarding the wisdom of the German plan in the initial advance on Paris. As is generally known, Von Moltke, confident of his ability to outguess the French general staff, and also to improve upon Von Schlieffen, amended and changed the famous Von Schlieffen plan until about all it had in common with the original scheme was the general direction of the advance.

When we look back upon the actual drive into French territory, it is possible to discover reason for thinking that the German advance would have attained ultimate success had the German cavalry been utilized in a different manner. Of course this is but one of many of the great "ifs" of the World War, but it is an interesting one. When Von Kluck drove the imperial First Army into France, he used his entire force of cavalry as a screen, shielding the front of the German armies. In using the cavalry in such manner, it lost its power of mass, and was of scant value as a tactical force.

As the Imperial armies drove through France, so rapidly did the French retire, that the Germans found it difficult to continue the pursuit and gain any degree of military contact. The French retreat, generally recognized as more or less of a rout, brought the whole Allied cause close to ruin. All that the German forces needed was some means of turning the retreat into a hopeless panic.

Here was needed the massed cavalry. But, just at the time Von Kluck needed his cavalry as a striking force, he didn't have them. As a result, the German command was unable to exploit the French retreat, and the French were eventually able to reorganize, with the result that both sides settled down into the excessive attrition of trench warfare. True, the initial phase of the war was not decided by cavalry, but it is likewise true that the outcome could have been vastly different had the German high command possessed cavalry when needed.

In direct contrast to the alleged misuse of cavalry on the Western front, German arms were able to deliver a "coup de grace" to the Russian armies on the Eastern front by means of correct use of mounted forces. With one cavalry division, Von Hindenburg was able to prevent Rennenkamph from joining Samsonov, and was thue able to defeat the main Russian armies of Samsonov at Tannenburg.

The account of General Allenbv's Palestine campaign with the Desert Mounted Corps is generally conceded to be the high point of cavalry action in

the World War. The drive from Kantara, up past El Mugar, Rafa, the mounted charge of two brigades into the German and Turkish machine guns at Beersheba, then past Jerusalem, and finally ending at Damascus, proved the value of horse units in a campaign presenting opportunity for maneuver.

As late as 1918, when the German armies made their last bid for victory, horse cavalry again was of value to the Allied cause. It was during the big attempt to reach the English channel that the Allied line in the Loore Sector was seriously threatened. With no large reserves in the vicinity of the possible break, General Corneau's II French Cavalry Corps marched 75 miles the first day, and in 68 hours had covered 125 miles, went into action and fought continuously for fifteen days. At the conclusion of the fighting, still on short rations, the II Corps broke camp and proceeded to march another 125 miles in three days and again go into immediate action.

This action of the French cavalry is an excellent example of the ability of horse units to serve as a means of transporting large bodies of troops for a considerable distance, and getting them on the field in a relatively good physical condition. It might be of interest to point out that the writers of "Cavalry Combat" contend that the experience of the World War seemed to prove that cavalry provided the means of transporting large bodies of troops distances of up to 75 miles and arriving on the battlefield in shorter time than would be required to procure sufficient trucks or trains and move the complete force to the vicinity of the engagement.

There is no doubt but what the entrenched barbed wire condition of the western front were anything but suitable for cavalry actions, but even after these trenches and wire entanglements became permanent fixtures of the theater of war, cavalry did show its ability to operate successfully under these adverse conditions. At the battle of Amiens, within 100 days of the end of the war, three cavalry brigades participated in the Allied advance. For a rather convincing exhibition of what properly handled cavalry can do in modern warfare, one merely has to follow the account of the action of the Queen's Bays regiment.

"Cavalry Combat" relates how, after passing through the Australian Infantry just as it had taken its second objective west of Harbonniers, the Bays went into action, capturing 30 Germans and 2 trench mortars, and almost immediately afterward two troops (companies) charged an enemy position, killing 20, taking 26 prisoners, and two machine guns. Later, after continuing the advance supported by Whippet tanks, the regiment went into dismounted action in preparation to meeting a strong enemy counter attack.

Even more convincing than the example of the Queen's Bays is the account, also related in detail in "Cavalry Combat" of the 5th Dragoon Guards. The Dragoons, fighting in the same Harbonniers sector as the Queen's Bays, in one hour of intensive operations against enemy infantry columns, charging into rifle and machine gun fire, the regiment, beside inflicting large casualties, captured 740 officers and enlisted men, in addition to horses and supplies.

It is certainly interesting to note the extent of the casualties suffered by the 5th Dragoons in these engagements, for while inflicting relatively heavy damage on enemy troops, the regiment had but one officer and six enlisted men killed, 42 officers and men wounded, and only eight missing.

The above are only scattered examples taken from "Cavalry Combat," which contains within its 500 pages a great number of other actions, just as convincing in the proof of the abilities of horse cavalry in modern warfare.

However, almost two decades have passed since the close of the World War, and military methods have undergone change, along with improvements of weapons and material. Despite the fact that war clouds are hanging ever lower over the European horizon, and despite the fact that the apparent emphasis is upon mechanization, a close investigation of modern continental army organization will show that the horse is a long way from being extinct in the military sense.

Of all the nations that have proven their faith in mechanization, Germany probably stands at the head of the list. Although equipped with the latest in armored cars and tanks, the Reich army today has allotted a major place in the military system to horse units.

The "Bulletin Belge des Sciences Militares Brussels" of August, 1937, reports the Germany Army today possesses 14 cavalry regiments. Perhaps the most interesting fact concerning German organization involves the widespread use throughout the entire army of horse units as means of local reconnaissance for infantry organizations. Each German infantry regiment includes a mounted platoon of 32 officers and men. As novel as it is potentially effective is the method used for reconnaissance and security. Explaining the use of the mounted unit, the account says, "The mission of the platoon is to conduct reconnaissance and secure the infantry regiment on the march. Reconnaissance is carried out by patrols operating in advance of the regiment as far as the zone of division reconnaissance. Security is executed by patrols moving in advance of the point. The security patrols are formed in echelon and advance so as to cross each other; at the point of intersection, the mounted men halt until the foot troops move up."

Needless to say, direct reconnaissance extending as far as the division zone would be of value to the regimental command, and the security of criss-crossing patrols, capable of rapid movement, would afford a degree of protection lacking in foot patrols.

The modern Russian Army, also committed to a strong cavalry ratio, extends the horse units throughout the infantry organizations. As noted in a recent issue of "The Army and Navy Register," the French military magazine "Revue d'Infanterie" has published a detailed description of the formerly secretive Russian military force.

(Continued on page 78)

BATTLESIGHTS AND BULLSEYES

(*Continued from page* 14)

The variations in the markings of the standard sight are not the only variations to be met with. Figure 8 is marked 45 and is .45 inch high; it should have been marked 50 if it were to agree with the commercial markings previously described. Similarly, Figures 9 and 10 are marked 44 and 42 instead of 40 and 20. On other than the commercial series, the markings may be on either the right or left side of the sight. On the commercial series the marks are at the bottom of the blades and the sight must be dismounted from the rifle before the height can be found. It would be better if all sights were marked on the upper part of the blade as are sights manufactured by the Depot of Supplies, so that the height of a calibrated sight could be seen without the necessity of removing the blade from the movable base.

A stamped sight should never be cut down by filing. A calibrated and stamped sight has a definite mission in life and costs money to make. If a lower sight is needed, remove the marked sight and substitute one of a lower marking or a standard sight cut down. Figure 12 shows a "store-bought" blade marked 10 but the marking is false for at some time in its career an armorer, instead of changing the sight from 10 to an X, filed it down and thus destroyed its value as a calibrated sight. Thus, an armorer, in setting up his shop in preparation for making sight changes, must measure each sight before putting it in stock to make certain that it has not been altered. Otherwise he is liable to run into many an embarrassing situation. An armorer should never cut down any sight until he removes it from the movable base, checks the height with a micrometer caliper, and then, after cutting, checks again with the caliper. This may sound like a lot of work and a lot of time, but if the calibration is to be accurate, this operation is absolutely essential.

An examination of rifles which have been adjusted by armorers filing down sights on the firing line without removing the blade and measuring it has shown that, almost without exception, they are still six to twenty inches in error at 250 yards. Some sights are case-hardened, some are of soft steel, and the armorer cannot possibly tell by visual inspection how much he has cut down a sight after filing the sight while still mounted on the rifle.

The armorer should have, in addition to a partitioned box holding his collection of calibrated "high" sights, another partitioned box holding a selection of cut down sights measuring from .35 inch to .39 inch high. If he cannot locate a sufficient number of sights of the various heights in stock he may anticipate his needs by preparing a sufficient number of each size required by filing down standard sights during his spare time before the practice begins. As to the number of each size needed, Table I gives a basis of numbers required to

KOOL CIGARETTES

Mildly Mentholated

SAVE B. & W. COUPONS FOR HANDSOME, USEFUL PREMIUMS

service 1,000 rifles. If, for instance, the armorer will work on only 200 rifles at any one time, his stock need have but one-fifth of the number of each size listed in Table I.

Figure 7 shows a cut down sight which measures .36 inch. In cutting the sight the armorer should preserve the curve of the basic sight in order to retain its optically advantageous form.

It must be stressed over and over that the armorer must measure with a caliper every sight before and after cutting it, or before adding it to his stock. Otherwise there is certain trouble ahead.

Now that the armorer has his collection of sights and a fairly good micrometer caliper with which to measure, he is prepared for the calibration tests. When a sight change is called for he needs only to take off the old blade, quickly measure its height, arithmetically add the correction and put on the new sight of the correct height.

Before going on to the function of the coaches in the calibration tests, there must be an agreement as to the definition of the term "zeroed at 250 yards." A rifle zeroed at 250 yards is a rifle whose sights are so adjusted that a bullet fired from this rifle, there being correct sight alignment, will strike the point of aim. That means just what it says—but behind that statement lies the source of most of the inaccuracies in sight calibration. Many a coach, many a range officer holds that when a rifle is aimed at 6 o'clock on the figure at 300 yards and 10 fives well in are produced in a rapid fire string the rifle is correctly calibrated. But—BUT—this rifle is NOT correctly zeroed. It is one of the 53.2% of all rifles that will miss a prone man at 250 yards. It is one of the rifles that may shoot over the head of a standing man at 100 yards. This rifle is practically worthless to the shooter if he engages in bush fighting—even though he did get a possible at 300 rapid on record day.

A rifle zeroed at 250 yards will hit the point of aim at 250 yards. A rifle zeroed at 250 yards will hit below the point of aim at 300 yards. A rifle zeroed at 250 yards and aimed at 6 o'clock on the figure of the rapid fire target at 300 yards will, in the hands of an expert shot, produce but 3 5's and 7 4's at 6 o'clock, and the 3 5's will be the result of dispersion.

Thus, with a rifle calibrated at 250 yards, a shooter, to get fives, will hold in the middle of the figure at 300 yards, and at the bottom of the figure at 200 yards. He will never take "a line of white." In the field he will always aim at the middle of the figure, and, if he's got what it takes to hold and squeeze in battle as well as in target practice, he'll get his man.

This idea of the correct aiming point is the important thing to get across to the shooters. Get them to cooperate on this point and the war is practically over.

The calibration tests should be fired by the men who own the rifles. Every one has peculiarities in aiming and no one can sight in a rifle as well as the owner, even though he be only a fair shot.

The tests should be made the first and second days of practice with the 30 calibre. Not much is gained by firing many rounds the first day. The men can fire a few prone and standing at 200 yards on the "A" target, followed by 5 shots prone at 300 yards, using the peep sight throughout. By this time the men are adjusted to their positions and accustomed to the shock of gun fire. Now is the time to fire the first calibration test. Fire two strings of five shots each, unmarked, on the "A" target at 300 yards, prone position, using the battlesight. Caution the shooters to hold at exactly six o'clock for each shot and to get off every shot exactly the same way, the best possible way. Tell them not to hurry, for it is not a rapid fire exercise, but a determination of how small a group they can hold. Use the "A" target for this, for the smaller the aiming point, the better will be the group. Fire the shots unmarked until the end of a string of five so that the lads will not be led into the error of holding off trying to get into the bull. At the end of the first five, have the target withdrawn, a spotter put in every shot hole and the target marked. When the shooter and the coach have viewed the group and talked over the situation, paste up the target and have it run up for a second string of five shots unmarked. The only purpose of the coach viewing the first group is to enable him to locate the battlesight windage zero of the rifle. Incidentally, the battlesight windage zero is often entirely different from the peep sight zero; there may be as much as one and one-half points difference due to difference in the alignment of the machines that cut the battlesight notch or drill the peep hole. In firing the second group, the coach must talk the shooter into firing the second five shots with exactly the same alignment and same hold as he did the first five, even though the first five were all twoes just on the bottom of the target or all threes at one o'clock. When the target is marked the second time the coach will have a second group to work on. It should be on the same horizontal line as the first group but directly on the six o'clock-twelve o'clock line of the target. If there is much vertical difference between the two groups, the coach will have to select a mean between the two, and, incidentally, is assured that here is a man who will require much attention during the next few days. However, the coach locates the center of impact of the 10 shots. If the center of impact lies within 3 inches of a point 1½ inches out at 6 o'clock, the sights are perfect and the rifle is zeroed at 250 yards. If the center of impact is 7 inches out at 12 o'clock, the center of impact is 7 plus 10 plus 1½ inches or 18½ inches too high.

What does the coach do with this figure? Before going on the line to coach he is carefully instructed in the vagaries of battlesights. He is indoctrinated with the 250 yards zero idea. He is then drilled in the rule that "a change of .01 inch in height of sight changes the point of impact on the target 3 inches at 300 yards." He is then worked out on the rule that "to raise the center of impact on the target raise the rear sight or lower the front; to lower the center of impact on the target lower the rear sight or raise the front." How long does it take to get this across to a coach? A good instructor who knows what he's talking about and how to say it can put it across to the average Marine non-commissioned officer in about three hours and be

certain that the coaches will perform 100% correctly. A mimeographed sheet showing a few type examples in the hands of the coaches the first few days they work will aid in preventing errors.

Going back to the figure "18½ inches too high" and what the coach does about it. The coach divides the 18½ by 3, the number of inches a .01 inch change in height of sight will move the center of impact at 300 yards, and gets the figure 6. The figure 6 is the number of hundredths of an inch that the front sight must be changed in order to bring the zero of the rifle to 250 yards. The group was 18½ inches too high so the front sight must be RAISED .06 inch. The coach now writes on a slip of paper "Pvt. John Doe, Rifle No. 33445566—PLUS SIX." The slip of paper is placed under the rear sight leaf of Doe's rifle. Doe is now through for the day, and after cleaning his rifle, he turns the rifle with the slip of paper under the leaf in to the armory. The armorer has Doe put his rifle in line and tells him to come back for it that evening. Doe's rifle will be checked and the sight changed before the next day's firing.

While the range party is carrying out an afternoon schedule that involves pistols or automatic rifles, the armorers are changing sights for the entire range party. Table II shows magnitude of the changes that were called for in calibrating a series of about 1,300 rifles and is average.

The armorer's work in changing the sights is not as complicated as it sounds. If the coaches calculate the magnitude of the changes necessary to properly correct the battlesights, one skilled armorer assisted by a semi-skilled mechanic can accurately correct approximately 100 rifles per 8 hour day, day in and day out. In a pinch they could do as many as 125. If a detachment is firing on a range where there is an insufficient number of armorers, the gunnery sergeants and platoon sergeants should be able to do the work. However, a factor to consider is that approximately 44.1% of the rifles will need no change, so that actually one armorer and one helper can take care of a 100-man firing party or two armorers and two helpers can take care of a 200-man firing party in about four hours and a half. Or, if the next 30 calibre rifle practice is held off until the second afternoon, the two-man team can handle a 200-man shooting detail and the four-man team a 400-man detail. But this speed only when the coaches do the figuring; the work will go much, much slower if the work is done on the firing line. The armorers have to be well organized and well equipped to make the changes fast and accurately.

The calibration of a rifle by firing is not always accurate and therefore does not result in an accurate correction every time. As a matter of fact, the first changes will be only 71.4% correct. The error is generally due to the man who does the firing—poor position, poor sight alignment or some other fault that comes out in the wash after another day or so of practice. Two and sometimes three calibration firings on successive days must be made before the result is correct in every case. The second day and third day check, if one is necessary, is made by firing only one 5-shot group unmarked and on the D target. In this case the coach talks the

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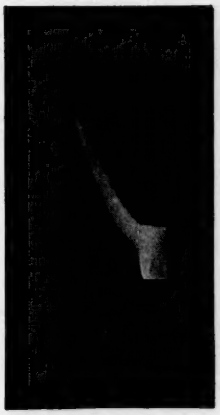

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shooter into aiming directly at the center of the figure at 300 yards. If the group comes up all fives or well distributed above and below a point 6 or 7 inches in at 6 o'clock, the calibration is correct and no further check is necessary. Otherwise, the coach must talk the situation over with the shooter and decide on a further change.

Table III shows the results that may be expected in accuracy of sight changes in 1,000 calibration test firings by average Marines.

An analysis of Table III will show that while only 559 rifles per 1,000 will be changed at all, there will be a total of 851 sight changes made before the 1,000 rifles are all correct. Table I lists 779 sights of 11 different sizes that will be required to service 1,000 rifles, without running out of any one size. The 779 sights will take care of the 851 sight changes for the reason that when an old sight is taken off a rifle, it is measured and put in stock. When the 851 changes have been made the armorer will still have his 779 sights and, in addition, the distribution as to number of each size on hand will be about what he started with.

At best, this sight calibration is a tough job for all hands. Accuracy is the one thing we are looking for and there is no easy way to get it. The work necessary to get 100% accuracy is well worth while when we stop to think that the lads may have to take the field tomorrow or next week or one of these days with the rifles we prepare for them on the rifle range. If we do slack work on the rifle range they'll get slack results on the battlefield, which is bad business in a gun fight.

When the job is done, do not feel that your troubles are over and that you may now rest on your laurels. Between now and next year, 55.9% of all rifles you so carefully calibrated this year will get all out of whack for one reason or another—and you'll have it all to do over again.

Which brings up the point that before you take to the jungle to hunt a gun fight, locate a good, clear space in some arroyo where the boys can shoot at a bucket or something until they relocate that elusive "zero" they can't keep track of. You'll take more scalps if you do!

TABLE I

NUMBER OF EACH OF THE VARIOUS SIZES OF SIGHTS REQUIRED TO SERVICE 1,000 RIFLES

No. 50	11	20	73
40	20	10	73
30	55	X	121

(Note: The above sizes may be procured from the Depot of Supplies.)

.39	134	.36	37
.38	134	.35	20
.37	101		
		Total	779

(Note: The above sizes must be cut from stock by the armorer.)

TABLE II

MAGNITUDE OF SIGHT CHANGES CALLED FOR IN CALIBRATING 1,284 RIFLES

		1st Change	*2nd Change*	*3rd Change*	*Total*
Plus	.10 inch	1	----	----	1
	.09	4	----	----	4
	.08	5	----	----	5
	.07	5	1	----	6
	.06	8	1	----	9
	.05	29	5	----	34
	.04	26	14	2	42
	.03	44	19	4	67
	.02	81	59	5	145
	.01	39*	20	5	64*
Minus	.01	45*	15	6	66*
	.02	122	19	4	145
	.03	132	11	2	145
	.04	90	10	1	101
	.05	35	7	----	42
	.06	34	7	----	41
	.07	12	2	----	14
	.08	8	----	----	8
	.09	5	----	----	5
	.10	3	----	----	3
Total		728	190	29	947

(*The drop here is due to the coaches' decision to let well enough alone and not make a change which would involve only three inches' shift one way or another.)

TABLE III

Percentage of rifles which will require no change	44.1%
Percentage of rifles that will require at least one change	55.9%
Percentage of the 55.9% that will be correct after one change	71.4%
Percentage of the 55.9% that will be correct after 2nd change	97.0%
Percentage of the 55.9% that will be correct after 3rd change	100.0%
Percentage of all rifles that will be correct if one test is fired	83.7%
Percentage of all rifles that will be correct if two tests are fired	98.3%
Percentage of all rifles that will be correct if three tests are fired	100.0%

ANTIAIRCRAFT PROTECTION FOR OUR NAVAL BASES

(*Continued from page* 18)

In a broad sense the mission of the Marine Corps might be called that of service to the Navy as a component arm. We in the Marine Corps should therefore, in carrying out this mission, seek opportunities to be of service. The Marine Corps has already the mission, as prescribed by Navy Regulations, of protecting advanced naval bases. When this mission was first assigned to the Marine Corps, no need for such a thing as antiaircraft protection was visualized. But now that

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such a need exists, the Marine Corps is well able to step in and assume the responsibility for the fulfillment of that need.

For its own interior needs in land operations and for use in the defense of advanced bases the Marine Corps requires a certain amount of antiaircraft artillery in all categories, including the 3" antiaircraft gun, and possibly higher calibres depending on continuing developments. In other words, the Marine Corps has a nucleus of antiaircraft materiel and personnel, which could with expansion furnish the requisite antiaircraft protection for naval bases. At the present writing the Marine Corps has one antiaircraft battalion fully equipped which has been in operation for a year. The equipment for a second battalion has been purchased and it is understood that a second antiaircraft battalion will be organized within the next few months.

Marine officers are trained for antiaircraft artillery duty through a course provided in the Marine Corps Schools (Base Defense Weapons Course), The Coast Artillery School, and through temporary duty under instruction at the plants of antiaircraft materiel manufacturers, such as the Sperry Gyroscope Company at present. At the Marine Corps Schools, in addition to the technical training in the Base Defense Weapons course, all courses study the tactics of employment of antiaircraft artillery in the protection of advanced naval bases. Which advanced naval bases differ in no respect, as regards antiaircraft protection, from our permanent naval bases.

It is my personal conclusion that the Marine Corps is the organization which can best assume this task of antiaircraft protection for naval bases, both from the traditional place of the Marine Corps in relation to the Navy it serves and from the present situation as it exists.

If the Marine Corps wants this duty—now is the time to get it. The Army has recognized the necessity for antiaircraft artillery with the recent appropriation of over $23,000,000 for purchase of materiel. The Navy recognizes the necessity and will soon do something about it—unless we do it for them. Antiaircraft artillery is entirely defensive in nature and thus is in line with the policies of the United States—and in great popular favor. An important factor. And yet antiaircraft artillery is as necessary for the offensive, as it is essential for the defensive. Aviation and naval forces are freed for offensive action.

Naturally, the amount of antiaircraft artillery required to give our Navy adequate protection of its naval bases from aerial attack must be carefully considered by boards of qualified and experienced officers and the demands for this purpose must be balanced against the innumerable other demands that face the leaders of our Navy. However, to carry on this discussion further it will be assumed that the Navy desires to fully protect one base on each coast, and two outlying bases, a total of four which she considers the minimum requirement. Of course there are others which need protection—but we shall assume that these four are the vitally essential

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ones. A study of a typical naval base has disclosed that a minimum of about two antiaircraft artillery regiments are necessary for reasonable protection. Hence we arrive at a minimum of eight regiments of antiaircraft airtillery, 24 battalions. Fantastic figures is the reaction. We have two battalions—but 22 more! It seems impossible, yet when we consider the absolute necessity for this protection we need a different reaction. One of realization, of comprehension.

The Marine Corps has recently had its authorized strength raised to 27,497. The Major General Commandant visualized the day when the Marine Corps would face its next emergency expansion and put through this authorized increase. It means that in event of a sudden emergency, Congress will not have to pass an authorization for increase before anything can be done about it. Headquarters, Marine Corps, can immediately go ahead, the green light has been provided.

The effect of this authorization is that an increase in our strength is dependent on an increased appropriation. If the Navy desired to do so, then it could allot the funds for proposed new ships to adequately defend her naval bases from aerial attack, or preferably of course, obtain new appropriations for that purpose. This expansion, if decided upon, would take many months to complete. Rapid production of the equipment is not at present possible, although recently adopted methods have greatly improved the situation. Furthermore, our sources of supply are at present cluttered up with foreign orders, and the antiaircraft expansion of the Army will make the situation yet more difficult. In other words, we couldn't expand as rapidly as we might desire without a great deal of improvement in our methods of procuring the equipment.

The delay in procuring equipment does have the effect of granting us time in which to train officers and noncommissioned officers for the control and operation of this materiel. We have a good nucleus of experienced personnel, and schools with years of experience in antiaircraft instruction so that the problem of training seems more easily taken care of than the problem of equipment procuration. The enlisted personnel may be increased some 10,000 without going over our authorization, so that the only immediate problem there is obtaining the yearly appropriations to pay and support the increased personnel. This can be done if the Navy can be sufficiently impressed by the necessity for this form of protection.

The training of the new personnel in recruit camps would afford us a test of our ability of expansion, to meet the final test of war, and in itself could be most invaluable training.

The antiaircraft defense of a naval base presents a unique problem in coordination. Participating in this defense are units of the Army, Navy, Marine Corps, Coast Guard, and, broadly speaking, all citizens residing in the zone concerned. Not all of these agencies are concerned with the actual firing of the guns, but they all have their part in the completed scheme of action.

The army will ordinarily have some antiaircraft protection in the vicinity of a naval base because of the location of certain of our present naval bases in the vicinity of large cities and other vital areas. These antiaircraft units should be blended into the general tactical plan, but provision should be made against contigency of army changes. The antiaircraft guns of ships in harbor should also be blended into the defensive scheme. Of course these ships may not always be present, and that situation must be provided for.

The coordination of antiaircraft artillery and friendly aviation is a most delicate problem. A problem which requires excellent planning and frequent execution for its solution. It is obvious that a central control agency is needed and that the units concerned constantly apply themselves to the problem. The Marine Corps as a component arm of the Navy is always available to work with the Navy towards the best solution of this problem.

All agencies enter into the antiaircraft intelligence net. The Army has conducted experiments this fall with a civilian air raid warning net covering eastern North Carolina and it is reported as functioning satisfactorily. The warning net for a typical naval base would involve utilizing patrol vessels, to cover the sea area adjacent to the base.

A mobile defense of our naval bases appears desirable. The Army has some fixed defenses in Panama but the danger of spies gaining information as to the location of such defenses is too great a risk to run. The presence in this country of certain unassimilated persons who carry on allegiance to other countries would make it impossible to conceal the location of an antiaircraft installation. However, with our present mobile equipment, surveyed and prepared positions, with several alternate positions, are a most satisfactory answer to the problem.

The Navy and Marine Corps could immediately begin a vast amount of preparatory work if a program of this type were decided upon. A complete survey of each base, and redistribution of supplies and activities to give passive protection by dispersion would be one of the early important duties. Complete engineering surveys of the ground and preparation of plans for occupation of the ground in manifold ways to give deceptive active defense would be another of the major duties to be undertaken at an early stage. Coordination with incidental army protection and antiaircraft guns on ships in harbor would be a most difficult and uncertain task. Organization of a warning net employing all services and many civilians must be planned out.

With the materiel already on hand, and additional as it would arrive, extensive and intensive experiments would be necessary. Occupation of the actual ground surrounding the naval bases would be a most interesting and instructive test. So-called "black-outs" must be tested; communications must be organized using every available facility.

The Navy and Marine Corps have already started working on certain of these problems, utilizing the limited amount of Marine Corps antiaircraft materiel which is now available. It is hoped that these experiments will serve to impress on the Navy the necessity and importance of antiaircraft protection for her naval

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bases, and give to the Marine Corps a new mission, that of furnishing antiaircraft protection to domestic naval bases.

Conclusion:

The Marines have always been proud of their adaptability, their versatility. Throughout the existence of the Corps changing conditions have brought forth immediate response. This has been accomplished by looking forward, matching up the factors which will influence the growth of the Corps, and being prepared to meet changing conditions which are foreseen.

Foolish would be he who stated that our "small wars" are over. Yet, certain indications are present that this field is decreasing in scope. Our Central and South American neighbors are increasing the stability of their various forms of government and revolutions are becoming quite infrequent. Furthermore, sentiment in this country at present is strongly against further intervention by armed force in the affairs of our southern neighbors. We desire the good will and trade of these countries and increasingly hesitate to appear dictatorial or overbearing in our relations with them.

Looking ahead, we find certain fields narrowing in scope. But many are the others opening up before us. The future of the Marine Corps rests on the choice made. In this article an effort has been made to show that the Marine Corps, the Navy, and the country would be benefited if the Marine Corps were assigned the function of protecting our naval bases from aerial attack.

MARINE CORPS SELECTIONS

(*Continued from page 22*)

Lieutenant Colonel Allen H. Turnage
Lieutenant Colonel Matthew H. Kingman
Lieutenant Colonel Alphonse De Carre
Lieutenant Colonel Samuel L. Howard
Lieutenant Colonel Lyle H. Miller
Lieutenant Colonel Ralph J. Mitchell
Lieutenant Colonel DeWitt Peck
Lieutenant Colonel Archie F. Howard
Lieutenant Colonel Raymond R. Wright
Lieutenant Colonel Pedro A. del Valle
Lieutenant Colonel William G. Hawthorne
Lieutenant Colonel Oscar R. Cauldwell
Lieutenant Colonel Arnold W. Jacobsen
Lieutenant Colonel Earl H. Jenkins
Lieutenant Colonel Thomas E. Watson

DEPARTMENT OF THE NAVY

WASHINGTON, D. C.

7 November, 1938.

From: The Secretary of the Navy.

To: Major General James C. Breckinridge, U. S. Marine Corps.

Subject: Precept convening selection board for the recommendation of Marine officers for promotion to the rank of lieutenant colonel, U. S. Marine Corps.

1. A selection board is hereby appointed, consisting of yourself as president, and the following additional members:

Colonel Philip H. Torrey, U. S. Marine Corps,
Colonel Julian C. Smith, U. S. Marine Corps,
Colonel Thomas S. Clarke, U. S. Marine Corps,
Colonel Harry Schmidt, U. S. Marine Corps,
Colonel William H. Rupertus, U. S. Marine Corps,
Lieutenant Colonel James L. Underhill, U. S. Marine Corps,
Lieutenant Colonel Ralph J. Mitchell, U. S. Marine Corps, and
Lieutenant Colonel Arnold W. Jacobsen, U. S. Marine Corps.

Lieutenant Colonel Donald Curtis, U. S. Marine Corps, will act as recorder.

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2. The board is hereby ordered to convene at the Navy Department, Washington, D. C., on November 10, 1938, at ten o'clock a. m., or as soon thereafter as may be practicable.

3. The number of estimated vacancies which will occur in the grade of lieutenant colonel before the end of the next succeeding fiscal year in excess of the number of officers now on the promotion list for that grade is forty (40). The Secretary of the Navy will furnish the board with the names of all officers in the grade of major who are eligible for consideration for promotion to the grade of lieutenant colonel and with the records other than medical of all such officers.

4. The board shall perform the following duties:

(a) From among those officers eligible for consideration the board shall recommend for promotion as best fitted not exceeding forty (40) majors, including those who are, or may become on promotion, additional numbers in grade.

(b) From among those officers eligible for consideration who have once failed of selection as best fitted by a preceding board, less those who may be selected by the present board as best fitted for promotion, the board shall designate those officers whom the board adjudges fitted for promotion. The words "who have once failed of selection as best fitted" are construed by the Secretary of the Navy to apply to those officers who have failed of selection one or more times.

(c) From among those officers eligible for consideration and who will have less than twenty-one years' service on the date the Board submits its report, the board shall report the names of any officers whose reports and records in its opinion indicate their unsatisfactory performance of duty in their present grade and in its opinion indicate that they would not satisfactorily perform the duties of a higher grade.

(d) From among those officers adjudged fitted for promotion the board shall recommend by name for retention on the active list a number of officers equal to the percentage thereof (if any) furnished to the board by the Secretary of the Navy as provided by paragraph 9 of this precept.

5. The board shall be governed by the act of June 23, 1938 (52 Stat. 944), which established "a merit system for promotion by selection" in the line of the Navy and is applicable to the Marine Corps. The following instructions contained in that act will be particularly observed by the board in the discharge of its duties, viz:

(a) Officers recommended for promotion by the board under the provision of paragraph 3 of this precept shall be those officers "whom it considers best fitted for promotion." (Sec. 9 (a).)

(b) The status of having failed of selection as best fitted shall not be considered as prejudicial to an officer with respect to his qualifications, his fitness for the naval service, or his eligibility for selection by the next succeeding selection board. (Sec. 9 (a).)

(c) The board shall carefully consider the case of every officer whose name is furnished it by the Secretary of the Navy. (Sec. 10 (a).)

The board shall also observe the following instructions relating to selection for promotion in the Marine Corps, contained in the act of Congress approved May 29, 1934 (48 Stat. 811, 34 U. S. Code 667d), and continued in force by the aforesaid act of June 23, 1938:

> "That administrative staff duty performed by any officer under appointment or detail, and duty in aviation, or in any technical specialty, shall be given weight by the selection board in determining his fitness for promotion equal to that given to line duty equally well performed."

The board shall also observe the following instructions relating to selection for promotion in the Marine Corps of officers in the grade of major assigned to assistant quartermaster and assistant paymaster duty only, contained in the act of July 28, 1937 (50 Stat. 537; 34 U. S. Code 632a):

> "That the recommendation of selection boards in the cases of officers assigned to such duty shall be based upon their comparative fitness to perform the duties prescribed for them."

6. The board is informed that the law charges the Secretary of the Navy with the duty of determining what officers are not physically qualified before furnishing the selection board with the names of officers eligible for its consideration, and such officers have not been included in the list of eligibles submitted to the board. Decision of the Secretary of the Navy, Sept. 8, 1938, file OL/P17-2 (380806R).)

7. No discretion is vested in the Secretary of the Navy or in any other person to prescribe a method of selection to be followed by a selection board, and any communication from any source which even remotely suggests that the board depart from the clear instructions prescribed by statute law is illegal. (Decision of the Secretary of the Navy, Apr. 27, 1931, file EN/A17-31 (310422).)

8. The following oath or affirmation shall be administered to the recorder by the president of the board:

> "You, Donald Curtis, do solemnly swear (or affirm) that you will keep a true record of the proceedings of this board."

The following oath or affirmation shall be administered by the recorder to the members of the board:

> "You, and each of you, do solemnly swear (or affirm) that you will, without prejudice or partiality, and having in view both the special fitness of officers and the efficiency of the naval service, perform the duties imposed upon you as provided by the act of Congress approved June 23, 1938, entitled 'An Act to regulate the distribution, promotion, and retirement of officers of the line of the Navy, and for other purposes'."

9. When the board has made the necessary decisions, it shall address a communication to the Secretary of the Navy stating separately the number of officers who have been agreed upon and will be recommended in the board's report as fitted or best fitted, respectively, to assume the duties of the next higher grade. The board will there-

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upon be furnished by the Secretary of the Navy with a statement, as directed by the President, giving the percentage, if any, of the officers adjudged fitted for promotion which shall be recommended for retention on the active list to meet the immediate requirements of the Navy.

10. The proceedings of the board shall be conducted insofar as may be practicable in accordance with the provisions of Naval Courts and Boards.

11. The names of the officers recommended or reported by the board shall be entered in handwriting. The report of the board shall be signed by all the members, and shall contain the following certificate:

"We, the undersigned, do hereby certify that:

(1) We have carefully considered the case of every officer whose name was furnished the board by the Secretary of the Navy.

(2) In the opinion of at least six (6) of the members, the officers herein recommended as best fitted for promotion are the best fitted of all those under consideration to assume the duties of the next higher grade.

(3) In the opinion of at least six (6) of the members, the officers herein adjudged fitted for promotion are fitted to assume the duties of the next higher grade.

(4) In the opinion of at least five (5) of the members, the officers herein recommended for retention on the active list are the best fitted, of those herein adjudged fitted for promotion, to be retained on the active list to meet the immediate requirements of the Navy.

(5) In the opinion of at least five (5) of the members, the officers (if any) herein reported in accordance with paragraph 4 (c) of this precept have reports and records which indicate their unsatisfactory performance of duty in their present grade and indicate that they would not satisfactorily perform the duties of a higher grade.

(6) The foregoing recommendations of the board in the cases of officers who are assigned to assistant quartermaster and assistant paymaster duty only are based upon their comparative fitness to perform the duties prescribed for them."

12. The recommendations of the board shall be regarded by the members of the board and the recorder as confidential. Upon completion of its proceedings, but not before eleven (11) full days have elapsed, including the date of the convening of the board, the board shall forward the record of its proceedings to the Judge Advocate General of the Navy.

CLAUDE A. SWANSON,
Secretary of the Navy.

The Board made the following recommendations and these recommendations were approved by the President on November 26, 1938.

MAJORS TO LIEUTENANT-COLONEL:

Major Shaler Ladd,
Major Richard H. Jeschke,
Major William P. T. Hill,
Major William E. Riley,
Major Ray A. Robinson,
Major Robert L. Montague,
Major David R. Nimmer,
Major Victor F. Bleasdale,
Major Merwin H. Silverthorn,
Major Leonard E. Rea,
Major William W. Rogers,
Major Curtis T. Beecher,
Major William K. MacNulty,
Major Bert A. Bone,
Major Harold D. Campbell,
Major William H. Harrison,
Major John P. Adams,
Major Benjamin W. Gally,
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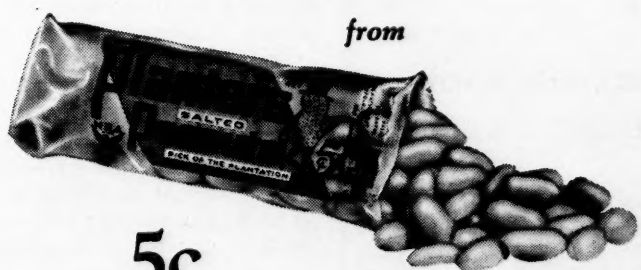

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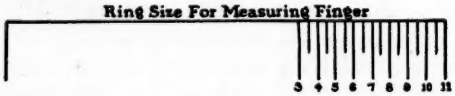

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Major Edward A. Craig,
Major Bernard Dubel,
Major Leland S. Swindler,
Major Ford O. Rogers,
Major Walter G. Farrell,
Major Ralph R. Robinson,
Major Frederick E. Stack.

AS FITTED:

Major John M. Tildsley,
Major George F. Adams,
Major Martin J. Kelleher,
Major Robert C. Anthony.

RECOMMENDED FOR RETENTION ON ACTIVE LIST:

Major John M. Tildsley,
Major Robert C. Anthony.

NORTH CHINA

(*Continued from page* 24)

ground that any major commitments in Central or South China would jeopardize success in a future war which might have to be fought on other fronts in Asia. To better illustrate the relationship which exists between the Kwantung Army and the North China garrison forces, I might add that a friend of mine who carried into Mongolia a "laisser passer" signed by none other than the General commanding Japanese operations in the north was definitely informed in no uncertain terms that his pass was "no good" in areas controlled by the Kwantung Army. Fundamental differences of opinion (reflected by the incident just related) are bound to affect the efficiency of the Japanese Army in the field when joint operations which involve the Kwantung Army and other forces are the order of the day.

It is true that the Japanese have seemed to many observers deficient in the technique with which they handle the instruments of today's warfare. The potentialities of such complicated mechanisms as tanks, aircraft and artillery can only be fully realized if these weapons are properly employed and the person who said that the soldier of these times must be a competent mechanic is not far wrong. It has seemed to some observers that the Japanese have been dominated by the machinery which should serve them. Perhaps the most glaring

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examples of this misuse of modern weapons have been furnished by some of the activities of the Japanese air force. On numerous occasions flights of three or more planes attacked small convoys of pleasure cars on roads near Shanghai and expended a great deal more in bullets, bombs, and gasoline than any results would have warranted. (It was on one of these occasions that the British Ambassador to China was wounded.) At another time three Japanese planes dropped about thirty bombs near a Chinese motor truck. As each bomb is worth several hundred dollars, this would have been an expensive pastime for the aviators under any conditions but might have been partially redeemed if they had managed to demolish the truck. After the strafing, however, the driver picked himself up from the muck of the nearby paddy fields, jumped into his truck and whirled off down the road in a cloud of dust.[2] The Canton-Hankow railway was bombed over one hundred and fifty times in a five month period last year. Over 1,600 bombs were dropped. When it is remembered that these raids were carried out unopposed by either Chinese pursuit or antiaircraft fire, one might reasonably expect some slight damage to the railway. As a matter of fact the line operated at about 90% normal efficiency during this period. As far as has been determined, neither side has made much use of aircraft on reconnaissance, photographic or artillery missions.

Several instances are recorded in which tanks were badly handled and needlessly destroyed or captured. Many times tanks advanced unsupported by infantry, and if the Chinese had had more than one anti-tank gun per Army corps (a Shanghai deficiency later remedied) the Japanese tanks would have been badly mangled many times. Japanese artillery technique was not impressive at Nank'ou in 1937. Although a battalion of 3" field guns was in position the officers directing the fire fired guns singly for the most part. Fire direction seemed haphazard. There were no definitely located Chinese targets and the Japanese sprayed the bare hillsides indiscriminately. The situation called for aerial reconnaissance and air spot but the air force was not used. If the Chinese had had one battery capable of executing counter battery missions at Nank'ou it could have blown the entire Japanese battalion out of the cornfields in which it was emplaced in less than fifteen minutes. Although there were several good positions in defilade nearby the Japanese batteries were set up in the middle of a large cornfield directly forward of the O.P. Japanese camouflage technique, on which subject Mr. Robert Lerquin comments rather acidly in the July, 1938, issue of the "Army Quarterly," was amateur. At Nank'ou no attempt was made to camouflage trucks, tanks, guns, caissons, staff cars or animal transport. All present at the battalion O.P. (including the foreign observers) were, however, ordered to carry sprigs of brush around. The anomaly of the situation struck us as essentially humorous but the Japanese were serious. Security measures to protect the artillery, the thirty-odd tanks, some armored cars and several score trucks in a large motor vehicle park several miles in rear of the firing batteries were conspicuous by their absence. A flying column might easily have descended from the hills and, with judicious use of gasoline and explosives, have turned the entire collection of vehicles into a shambles of useless steel.

The Japanese have made some tactical errors. This is a failing common to all armies and since their errors had, with one exception, no damaging repercussions which might have affected the plan of their operations in general, they need not be considered at length. The Japanese seem to have a weakness for over-penetration and have been caught several times without enough reserves to exploit. This happened at T'ai Erh Chuang and several other places and can be laid to over-confidence, the natural result of a long and unbroken string of tactical successes. General K. Doihara on what the

[2]This episode was actually witnessed by a foreigner and told as related above.

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Japanese press hailed as "the most brilliant operation of the war" led his 14th division into trouble near K'aiFeng in May by allowing two rapidly advancing columns to get out of mutual supporting distance. The Chinese were quick to realize this mistake and to capitalize on it and the Japanese press was as strangely reticent about Doihara as it had been about Lt. General Rensuke Isogai, whose 10th division had been embarrassed for similar reasons at T'ai Erh Chuang in the preceding month. Unfortunately, the Japanese have allowed no foreign observers to accompany their armies in the field and for this reason it is impossible to make more than very general statements on the subject of local tactics. One of our particular fetishes is (and properly) the subject of security. Failure to take proper measure for security caught up with a large unit of the Kwantung Army in North Shansi province in the fall of 1937, where at P'ing Hsiang Kuan they were attacked in a defile and roughly treated by the 8th Route Army.

There is no doubt that Japanese morale is high. Most Japanese soldiers would rather die than be captured and many carry "hari-kari" knives with which to disembowel themselves if capture is inevitable. More than one Chinese general in interviews with foreign pressmen has praised the qualities of the Japanese soldier. To account for this high morale we must digress for a moment. The structure of Japanese society is predominantly feudal and militarism has always been a definite feature of Japanese life. This fact is most strikingly evidenced by the ubiquitous "family sword" in its polished leather case which is proudly worn by all Japanese officers, non-commissioned officers and private soldiers who are fortunate enough to own one. One Japanese gendarme sergeant I met carried such a sword. It had been in his family for over three hundred years and was of course irreplaceable. With such universal emphasis on the warrior's art it is little wonder that the Japanese conscript conceives his service to the army and to the emperor more in the nature of a privilege than of an unpleasant duty. The Chinese have long had a saying "Good iron is not used to make nails—good men do not serve as soldiers." This was one of the few Chinese cultural concepts not borrowed by the Japanese. for in the hierarchy of Japanese semi-feudal society the warrior holds the highest position.

As a side light on the maintenance of morale in the Japanese army it might be mentioned that what are called (in Chinese) "Wei wen T'uan" or "Comfort" groups travel from place to place carrying with them small gifts from home for distribution to the troops on the various fronts. In these troupes are vaudevillians—singers, dancers, and musicians who entertain the men in transit, in camp, and in the field. Japanese troops with whom I travelled and ate last year for a few days were issued substantial meals of cold rice, meat, vegetables, eggs, and fish. They washed this down with hot tea. I ate at one officer's mess in the field. The food was good (assuming of course that one likes Japanese food) and there was sake, beer, and Black Label to wash it down. Most Japanese soldiers are literate and newspapers and magazines are much in evidence. As

most of the men seem to be able to afford to smoke, it is a reasonable assumption that cigarettes, cigars and pipe tobacco are sold cheaply at Army canteens. The troops are warmly clad in a sensible winter outfit. Heavy overcoats with huge collars and fur lined caps with tremendous ear flaps keep the soldier warm. In the summer the Japanese soldier wears the same outer uniform he does in the winter but takes off the woolen undershirts (of which he sometimes wears as many as three or four).

Very little is available on Japanese Army organization and equipment. The Japanese Army is organized into divisions of two brigades each. Brigades are commanded by Major Generals; Divisions by Lieutenant Generals. Each Brigade consists of two infantry regiments. In addition to the four regiments of infantry there is in each division a field artillery regiment, a transport regiment, a cavalry regiment and an engineer regiment. The division totals approximately 20,000. Tanks, armored cars, medium and heavy artillery and anti-aircraft are organized into regiments but are not organic to divisions. Some infantry and some cavalry regiments are motorized. There are several independent mechanized brigades now serving on the China front. Troops are armed with a rifle quite like the Guardia Nacional Krag in appearance, and when in the field, each soldier carries several potato masher type hand grenades. There seems to be one light machine gun (with a bipod mount) in each squad of eight or ten men. In size it is closest to the Thompson gun. Heavy machine guns weigh more than our Brownings but are, when mounted on a heavy and very stable mount, an easy load for four men. The steel helmet is quite like that recently depicted in "Life" magazine as worn by Czech troops. (It is a much deeper helmet than ours and covers the neck and sides of the head effectively.)

As most of those serving in the Japanese armies come from peasant stock and are what we would call "farm-boys," it can be readily realized why Japanese soldiers have qualities of endurance that have been appreciated since the Russo-Japanese war. The background of a simple, strenuous and frugal existence before joining the army means that the average soldier is in good condition when he joins up. Life in camp and in the field is not much more rigorous than life in the paddy fields has been. The Japanese soldier has stamina and campaigns in northern Manchuria as well as he does in the steaming heat of the Yang Tze valley.

On the other side the picture was not so bright. The provincial armies of north China were in general very weakly organized, badly equipped, illy trained and poorly paid. The officers who commanded them were political appointees with little if any experience in modern warfare. Armies were completely without resources and no replacement personnel or ammunition stocks were available to them. If there was any system of procurement and supply in the north China armies it was certainly haphazard. Mutual jealousies between commanders prevented the most fundamental coordination. Each army commander (and most division commanders) was content to make and execute his own plans without any reference to his colleagues. "The

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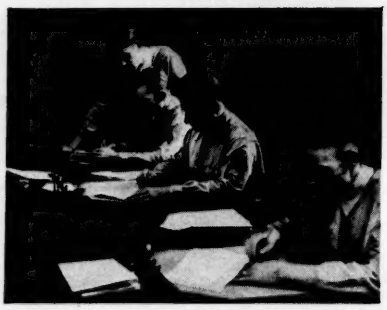

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leaders of the 29th Route Army had formulated no plan of action of their own; much less was there a co-ordinated scheme of military operations between this army and the Central forces."[3] Another observer says: "As to the famous 29th Army which operated in North China, it really does not deserve the name of army. Its divisions numbered from 5,000 to 8,000 men without any real commander above the grade of lieutenant. * * * * Most of the 'units' had not been paid for five months past. These men resisted only when they were forced to do so."[4] These statements are equally applicable to Han Fu Ch'u's 3rd Route Army in Shantung, to Yen Ssi Shan's so-called "army" in Shansi, and to Fu Tso Yi's Suiyan troops.

No matter how perfect the leadership of these northern armies might have been, the troops would still have been without the implements of modern warfare, for the mechanized and motorized apparatus with which modern wars are fought had never been provided. These armies had no aircraft, no tanks, no artillery. They were short on mortars, howitzers, and anti-tank weapons. Medical, engineer, chemical and communication facilities, if not wholly lacking, were at the best utterly inadequate. Individual equipment was poor and far from standardized. One observer examined seven different types of rifles which were among those abandoned by the Chinese at TaT'ung. Hand grenades were loaded with a mixture of black powder and sawdust,

[3]Bisson, "Japan in China," cited, page 23.
[4]Lerquin. cited, page.

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and as far as producing casualties might as well have been loaded entirely with sawdust. The helmets worn by soldiers in the 29th Army were flimsy and afforded their wearers about the same degree of protection they would have enjoyed if they had worn inverted saucepans.

A highly organized army like the Japanese can not pick up its tanks, guns, motor trucks and the thousands of tons of ammunition, food, gasoline and forage needed to keep it rolling and pack these loads on the backs of private soldiers. The Japanese needed the railways and the Chinese in the north obligingly turned them over almost intact. Hardly a rail was moved from its place; bridges, although slightly damaged, were never completely wrecked. Not one of the numerous tunnels on the narrow gauge line which enters Shansi province from the east was effectively blocked. The ready answer is that the Chinese had no knowledge of demolitions and no stores of explosives. This is true enough, but one can wreck railways without explosives. Bedford Forrest delighted in ripping up rails and twisting them around trees after they were properly heated. The Chinese could have done this. They could easily have ripped up every foot of trackage in north China. The reason that they did not resort to this is that the Chinese commanders had not even the most fundamental conception of the strategic value of railways. If they had but the faintest realization of what a railway can mean to a modern army there would not have been a track or a tie left intact in North China. The spearhead of almost every Japanese drive moved along the railways, and these narrow bands were absolutely vital to a speedy consummation of Japanese plans.

Mutual jealousies and suspicions harbored towards one another by higher commanders were inevitably reflected in the behavior of the troops. There was more than one instance of fighting between Chinese units in the north China theatre. Although these disturbances were purely local and were speedily quelled, they were evidence of the provincialism which so often animated troop commanders. Suspicion breeds distrust, and the fact that many of the leaders did not trust their colleagues was apparent on numerous occasions. The disastrous effects of this may be illustrated by a hypothetical case. Let us suppose that three divisions of say, two different army corps were defending in adjacent zones. For several days the defense would be rigid, the Japanese would be held. Suddenly and for no apparent reason the defense would completely break down, would evaporate into thin air. What had happened? Often this: Word would reach the left unit that the Japanese were attacking the right flank and that it was giving away. The left would then pack up and pull out, while the right resisted the attackers. When news that the left elements had moved off reached the defenders on the right, they would then depart for more salubrious climes. If the center was still present after the departure of the units on its flanks, it was never for long. Although many of the Chinese collapses may be laid to the superior strategy of a hard-hitting attacker, it is safe to say that equally as many were directly due to the fact that commanders

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simply did not trust each other. This feeling naturally communicated itself to the troops under them and there was resultant calamity. This was well illustrated in the attempt made to straighten out the Kiangwan salient in the Shanghai operations.

Chinese commanders in the north were conditioned to bow and arrow warfare. They suffered from what we might term a "walled town" complex. To shut one's self up in a fortress in this day and age is to invite disaster, but this is exactly what the Chinese did on more than one occasion. By so doing they completely nullified the advantage conferred on them by a numerical superiority often as great as three to one. Delay was the order of the day in north China, but instead of using their numbers to force wide Japanese deployments, they shut themselves up in walled towns and abandoned the initiative. These tactics permitted the Japanese to concentrate the weight of their modern weapons against the Chinese in relatively limited areas. The results were inevitable, and the effect on Chinese morale disastrous.

Wars and battles are not lost by private soldiers. They win them, but they don't lose them. They are lost by commanders, staffs, and troop leaders, and they are often lost long before they start. The soldiers who served in the armies of north China were potentially good soldiers. Their potentialities were never developed, they were never properly trained, organized, or equipped. Thirty Marines armed with bricks might be men of valor but they could not prevail against ten equally valorous Balinese, Eskimos or Hottentots who were armed with (and knew how to shoot) Browning automatic rifles. Courage is as important now as it ever was, but it alone is not sufficient. There must be training, organization, and coordination. The campaigns in China have attested that the Chinese are courageous soldiers, but in north China courage was too heavily handicapped, and as with our hypothetical Marines and their hypothetical antagonists, courage alone could not prevail.

(Lest these remarks be misconstrued, I wish to emphasize the fact that the north China provincial armies and the Japanese operations in north China have been the subjects of this discussion. None of the foregoing is intended to apply to the troops generally designated as "Central" or "Kwanghsi" units, nor to the 8th Route Army.)

In response to requests by the press for comments on the statement issued by the Japanese Government in regard to the situation in the Far East, the Secretary of State said that he felt it very important to view the situation in accurate and comprehensive perspective. The attitude of the United States and the position of the American Government in relations both with China and Japan, as with other countries, are, he said, governed and guided by the generally accepted principles of international law, by the provisions of treaties to which the United States and numerous countries—among them China and Japan—are parties, and by principles of fair dealing and fair play

between and among nations. This country's position with regard to the situation in the Far East has, he said, repeatedly been declared, and this position remains unchanged.

THE ROAD TO THE REAR

(*Continued from page 26*)

Battalion, Fifth Regiment, when they attacked successfully over the same ground on the eleventh of June. Many of them might have been saved had they been evacuated in time. These were generally men too severely wounded to call out or move. A great many were found and brought in by company hospital corpsmen who made repeated trips carrying in wounded after dark across the fields, still swept by machine guns. They worked clear up to the very edges of Belleau Woods, which was still strongly held by the enemy.

Hill 142 and the surrounding woods were captured by the First Battalion, Fifth Regiment, on the 6th and 7th of June. I visited the battalion aid station two thousand yards in rear of the front at "Champillon," on the afternoon of the 7th for a sack of dressings. There the battalion surgeon and his chief and four hospital corpsmen had been working *continuously* since the attack on the morning of the sixth. Dead were piled nearby and about a dozen litter cases were awaiting evacuation. Thomas splints were everywhere. Heaps of soiled bandages and dressings of all sorts were underfoot. A large black pot of coffee simmered over a small fire and "Red Cross" cigarettes seemed fairly plentiful. The dressers in the aid station had dipped their hands in tincture of iodine until they were purple-black. All were haggard, dirty and exhausted, but there were still twenty or more wounded waiting their turns and a group of prisoners approaching bearing more. Farther down the road was a group waiting the ambulances which were being driven directly to this battalion aid station from the field hospitals, five to eight kilometers behind the lines. All along the road were walking wounded resting or slowly making their way rearward.

With the exception of a short rest at "Pont-au-Mousson," a quiet sector, all the actual fighting engaged in after 5 June in the "Bois-de-Belleau" assumed the character of open warfare as compared to the stabilized trench warfare, which characterized our tour near "Verdun." The front line advanced from day to day, at times as much as six or eight kilometers. These movements necessitated rapid and frequent advances of aid stations. These were accomplished by a battalion surgeon or trusted chief and a few hospital corpsmen who advanced behind the battalion until a sheltered site was selected, well removed from road junctions, ammunition or food dumps, artillery or troop positions, water holes and other places that might draw fire. When the new advanced aid station was selected, a runner informed the battalion surgeon at the rearward station who then moved his station forward to the new site and sent the runner to the battalion commander giving him the location of the new aid station. This runner informed all officers and

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men that he passed of the location of the new aid station. As soon as he was able, the battalion commander informed all of his companies.

After the brigade left Chateau-Thierry, TWELVE men from the line of each company were detailed to the medical department for training and use as stretcher bearers. (Note that 12 men per company was *FIVE PER CENT of the combat troops.*)

While the regiments were at rest behind the lines these litter-bearers were instructed in first aid and litter bearing but had they been navy hospital apprentices, they would have been far more valuable because of their more advanced technical training and the number of combat troops would not have been reduced. Four bearers of the same height were assigned to a litter team. They were fairly well trained and taught to take great pride in their new duties. Generally, they were replaced as casualties occurred. They were of great assistance to the company aid men in administering first aid and in locating and bringing wounded to them. The company aid men in effect established company-aid stations when a company had halted near a suitable sheltered spot. These bearers wore brassards showing a white "L.B." on a blue background and carried no arms. When the regiment went into the line, its 144 litter bearers automatically reported to the regimental surgeon. This gave the battalion surgeons 48 men and each company hospital corpsman 12 men who went into action carrying 6 litters. When the carry was not over 1,000 yards, it was found that two bearers were sufficient. But a carry of up to 2,000 yards necessitated 4 bearers.

But this use of line troops was an emergency measure because of the organic shortage of hospital corpsmen and litter bearers at the time and should not be considered a precedent. I quote here from the "Military Medical Manual," a text and reference book of Army Medical Training, page 527: "Under no circumstances must the attention of the combatant troops be diverted from the objectives of the battle. *They do not engage in the care of the wounded or in the evacuation of casualties from the battlefield. This service is the duty of the medical department,* which must be prepared to discharge it from the moment the soldier falls until he is evacuated to the rear by means of litter carriage and ambulance, receiving such medical aid en route as may be practicable under the circumstances, and until he has received the utmost in hospitalization and medical treatment that modern science can give him."

With this great increase in stretcher bearers, it was thought that the evacuation problem was solved.

BUT:

At Soissons practically all the casualties occurred in 30 hours on the 18th and 19th of July. Because of an almost complete lack of rear evacuation facilities for the wounded, aid stations were rapidly congested. One regimental aid station was in a large cave at "Vierzy," and there for most of the day on the 19th, several hundred carry-wounded lay without morphine, proper bandages, water, food or any comfort. Principally because of the roads being so crowded and the primary necessity of using them for guns, ammunition and troops, ambulances did

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not run during that day. During the afternoon of the 19th, returning ammunition trucks took most of the seriously wounded—all with only improvised dressings and without medicaation or alimentation, lying on a layer of straw on the floor of the trucks—to an unknown point somewhere to the rear. Under cover of darkness, a few ambulances came forward and assisted in the evacuation of the aid stations. Later, it was learned, most of the division wounded—9,000 to 10,000 men—were dropped by the truck drivers in a large field near "Tail-la-Fountaine, Aisne," and left lying in the hot July sun and rain for 18 hours before the French brought up medical personnel and trains to treat and evacuate them.

At "St. Mihiel," "Champagne" and "Argonne-Meuse," we may say that the treatment and evacuation of wounded was well planned and carried out as rapidly as possible. But at that time the regimental medical personnel had been increased to 7 medical officers, 1 dental surgeon, 60 hospital corpsmen and *156 litter bearers.* The usual disposition was as follows:

Regimental Headquarters

1 Surgeon
1 Assistant (at times)
1 Dental Surgeon
1 Chief Pharmacist Mate
6 to 8 Hospital Corpsmen

Battalion Headquarters

2 Medical Officers
1 Chief Pharmacist Mate
5 to 7 Hospital Corpsmen

Each Company

2 to 4 Hospital Corpsmen
12 Litter bearers.

Evacuation from the battalion aid stations to the rear was by Division Ambulance Company personnel who furnished at least one (divisional) Medical Officer and sixty litter bearers per combat regiment. Their ambulances went forward as far as possible, sometimes clear up to the battalion aid stations.

It is generally admitted that the Canadians overseas excelled even the British in the evacuation of their wounded. They used 31 litter bearers per battalion. Going into the line, I understand they carried at least fifteen litters but during evacuation used SIX MEN PER LITTER. Let me quote from "The All-Time Command Team" published in The Infantry Journal, July, 1937: "During the World War the British excelled in their evacuation system, hospital trains and hospitals. Whoever ran their Medical Department during the last fracas is my surgeon."

I would like to give you another quotation. This is quoted from pages 284-285 of Dr. Harvey Cushing's diary "From a Surgeon's Journal."

"This morning to the 1st Army School at Bruay, where is No. 22 C.C.S., whose C.O. is Col. Goodwin, brother of the successor to Keogh and a fine type of officer. I was quite terrified by the audience (the Army Commander, Gen. Horne and his staff, a lot of nurses, 50 N.C.O.'s with innumerable stretcher-bearers and sani-

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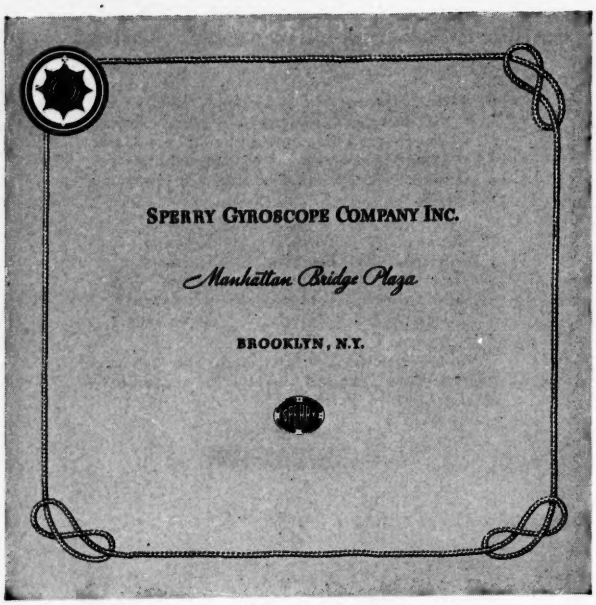

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tary-corps people), a difficult one to interest in my topic of head injuries—the more so since I was preceded by some extraordinarily good things from these forward-area people. One in particular on the subject of clearing the battlefield was given by a young Irishman from Trinity College, Lt. Col. Fletcher, C.O. of a field ambulance, wearing a D.S.O. ribbon and a bar in his Military Cross. There's no question about Fletcher's going out with his men into No Man's Land; and he told how they did their carrying, particularly around a broken traverse when in the trenches." (Note: C.O. Field Ambulance was an officer of the Medical Department.)

All this was illustrated by actual demonstration, even down to such details as concerned the disposition of the wounded man's box respirator and "tin hat"—the proper pads for the bearers' shoulders and neck—the numbers of bearers in a squad—all of the same height—should be pals—the M.O. must know men well enough to recognize their voices in the dark—the standardizing of the regimental aid posts—the placing of shaded lamps in obscure places and dugouts—the best way of carrying morphia. So much for everyday trench warfare; and then he went on to active operations—the using of German prisoners to carry wounded and the help often given by the Royal Engineers people—the necessity of every man's bringing something back, cups, blankets, water, dressings, etc.—the ways of searching for wounded at night and the need of warning the infantry well to left and right of your own area that searchers are out—and if searching parties get lost and have no landmarks, go toward the heaviest firing, as it's probably British! Then the question of whether stretcher-bearers should bring back identification tags from the dead, encountered when looking for wounded—with this is tied up the whole question of the possibility of looting. What to do when you're out and Very lights are shown—lie down? Not at all, merely stand absolutely still.

It was all very practical coming straight from such a man as Fletcher and told to the bearers themselves. He added one thing about carrying in the field, and the difficulties due to the fact that the duckboards, though laid in pairs, were too narrow for four bearers carrying a stretcher on their shoulders; so he had persuaded the engineers to put the lines of duckboards about six inches apart so the bearers could keep on them.

When he was through, Gen. Thompson asked for comments and there were several, and finally to my delight a big Canadian sergeant arose and said he would like to show how they carried THEIR wounded and could keep to duckboards while doing so. He and four bearers, all wearing M.C. ribbons, came forward—one of them got on a stretcher—the other four swung it up to their shoulders, but instead of its resting on their inner shoulders they put their heads and bodies close together and got the handlebars on the outer shoulder. Fletcher admitted he'd never thought of carrying in this way and he asked some other questions which brought out that the Canadians carry six men to the squad; and when someone asked about carrying in the trenches, the sergeant said, "We never uses a trench, sir, we takes over the top." This to the great delight of General Horne and the rest of us, and it's probably true.

So far, I have confined myself to the last major effort

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of the Marine Corps in which my experience was "first-hand."

We have seen the inadequacy of the Medical Department and evacuation personnel with which we carried on until the St. Mihiel drive in September, 1918. We have also seen the additional medical troops and litter bearers that were necessary for the efficient treatment and evacuation of the World War battle casualties in the 4th Brigade overseas.

But what about our next major effort? Under "Duty of The Marine Corps" in the "U. S. Navy Regulations" we find that we may be called upon to furnish "expeditionary forces for duties beyond the seas." That duty might require a ship-to-shore movement against opposition.

Overseas during the World War the maximum battle-day casualty per infantry regiment was thirty-five per cent. It is a conservative assumption that assault battalions landing against opposition will have thirty (or more) per cent casualties on the beach.

As a Captain of Marines I am vitally interested in the welfare of my men. I know many will be wounded and I want to be assured that they will be cared for then, at least as well as they were in France. As a Captain of Marines I am also greatly concerned with the morale of the troops with whom I enter combat. The modern Marine is a thinking individual with initiative. He has participated in many practice landings and ship-to-shore maneuvers, but how many times has this question of his been answered? "Who will care for me *after* I have been wounded?" Fear of being wounded is never mentioned and they have seen company aid men accompanying the combat units. But they have never seen wounded littered off the field and transported back to the ships, and they may well wonder! For the present morale and the care of my men when wounded I would like to see evacuation units formed *NOW*. Based on my experience in the Navy Hospital Corps and having been wounded in battle during the World War, my experience and studies since then in the Marine Corps, it is my honest, personal opinion that this is the Navy Medical Department's "pigeon" and particularly theirs in an overseas expeditionary force operating far from its base. Our Corps has been pitifully small ever since the World War and our combat numbers must not be depleted at the last moment to perform that necessary duty of evacuating battle casualties. Naturally we will, if we must, but that thought appears to be an excellent argument for the much desired increase and stimulation of promotion in the ranks of our Navy's Hospital Corps.

"Nothing demoralizes troops more quickly than to feel that when wounded on the battlefield, in the defense of their country, they can expect little or no aid for their suffering. The sight of severely wounded men unattended and lying about the battlefield crying for help and doomed to suffering and death is a profoundly depressing scene that may wreck the morale and the will to fight even of veteran troops. On the other hand, the presence of a brave, resourceful and efficient Medical Department ever present in the fight who will render prompt aid to the sick and injured is a most heartening and reassuring cir-

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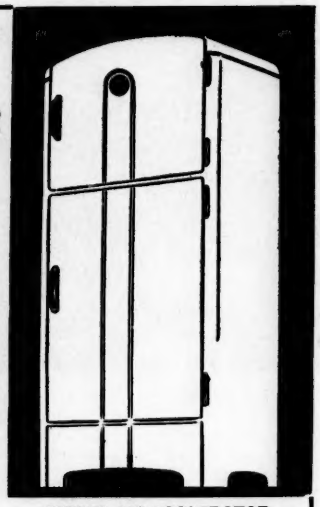
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cumstance that immensely increases the morale of the fighting troops."

Let us look back at two specific examples of a landing against opposition,—Gallipoli, April, 1915:

"The Medical Department plan provided for hospital ships and transports for evacuation. Three launches of twelve cot capacity were sent to each beach. Sorting of wounded was to be made on the beach. Serious cases were to go to the hospital ships and slightly wounded to the transports. The Navy was to begin evacuating from shore to ship at two p.m. with hospital ships and transports direct to Alexandria and Malta. Many of the medical personnel with the covering forces were killed. Many of the covering forces were wounded and returned to transports. They came back to ships carrying animals and supplies and on which no provisions had been made to receive wounded. This also interfered with the supply program. The weakest links in the chain were the number of launches assigned to the beaches and the plan to sort on shore. The medical arrangements had been based on a rapid advance inland. The casualty clearing stations were delayed and the beaches became filled with wounded under fire and it became a scramble to get wounded off the shore and on any large ship. Slightly wounded went to hospital ships and seriously wounded to transports without medical personnel. Evacuation broke down entirely. *Whatever fault there was lay in a failure to make provision for a reverse in the landing.*"

Gallipoli, August, 1915:

"After April the medical arrangements improved considerably. The plan was—Wounded to be evacuated by stretcher bearers to the beaches. Classified on the beach. Hospital ships to be off shore to receive the serious cases. Transports to receive the slightly wounded who were to be transported to Mudros on mine sweepers and trawlers. But—Some of the ambulance companies were landed without equipment. Clearing stations were late in getting ashore. Beaches became filled with wounded under fire. Again a mad scramble—again the medical plan broke down. The August estimate for the operation was 30,000 casualties—and that estimate was actually very close."

So much for Gallipoli and the result of a poorly planned and poorly executed medical plan. We have seen that overseas during the World War litter bearers equalling five per cent of the combatants functioned efficiently and we also note that the present "Landing Force Manual, U. S. Navy," on page 405 states: "Stretcher bearers should total *not less than two per cent* of the number of combatants landed."

Now let us consider what we actually are permitted by the present tables of organization! This is of more than an academic interest to the Marine officer, for he has a distinct RESPONSIBILITY. I quote from the current text-book on Logistics: "It is a *fundamental principle* that the commander of any military organization is in full control of all personnel assigned or attached to his unit and is *alone responsible* to higher authority for the results obtained by the unit. In accordance with this principle, the primary responsibility for the performance of all duties, *including the operation of the medical service,* rests on the commander concerned. The immediate responsi-

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bility for the operation of each medical unit rests on the senior medical officer of that unit."

In our present war strength tables of organization we find attached to each combat battalion two medical officers and sixteen enlisted. Of the sixteen enlisted, nine are needed as company aid men; two each for the three infantry companies, the machine gun company, and at least one for battalion headquarters (the headquarters company, kitchens, etc). That leaves seven. To function properly the battalion aid station requires *at least six corpsmen* to assist the battalion surgeon and his assistant. Subtracting six more leaves but one remaining corpsman unassigned in the battalion, and he really is needed at the aid station. But let me now quote the duties of this one remaining man from this text-book on Logistics: "Litter-Bearers.—Corpsmen from the battalion medical detachment not assigned to companies or the battalion aid station are employed in directing the wounded by hand or wheeled litters from the company areas to the battalion aid station." A bit of a job for ONE MAN! WHO will carry the wounded from the field of battle?

In the U. S. Army battalion medical section their organization equals ours with eight company aid men, two medical officers and six enlisted at the battalion aid station BUT they add what we entirely lack in our organization—a battalion litter bearer squad of eight men of the battalion medical section who are used in carrying and helping wounded from the company areas to the battalion aid station.

As we follow a wounded man back from the battalion aid station, his route is clear and rather well cared for but how does this wounded Marine cover the 500 to 1,000 yards from the spot where he is given first-aid treatment by the company hospital corpsman back to the battalion aid station? It is obvious that some provision must be made in our tables of organization for the transportation of these wunded and that this is a joint Marine Corps and Navy Medical Department responsibility.

But this criticism must be constructive. I suggest a "Regimental Collecting Platoon" of forty litter bearers per combat regiment. The number, forty, is arrived at in this manner. In the battalion are three infantry companies and a machine gun company totalling 647 combatants. Two per cent equals 12.94 or twelve litter bearers and a man in charge per battalion. There are three battalions, so we triple that, equalling thirty-nine, and we put one man in charge, giving us a regimental collecting platoon of forty litter bearers, preferably all Navy Hospital Corpsmen.

In conclusion I have one more quotation from the Infantry Journal, September, 1937, "At Fighting Weight," page 408:

"The duties of the medical collecting troops *are critical as to line morale.* In the A.E.F., largely from lack of such personnel, splendid fighting men were lost who might have been saved, and others arrived at hospitals with morale gravely impaired by their experiences after being wounded and before they reached safety. Yet *our best replacements are returned wounded men,* and after a certain point, they are also the most numerous. Most of our collecting (overseas) was done by prisoners, *but*

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prisoners are not always available. In the Canadian Corps, whose battalions (note: war strength 960 men) alone had as many as 31 medical enlisted men (note: .032 per cent), the evacuation system seems to have been prompt, efficient, merciful and conducive to high morale."

"Where the importance of this matter has not been recognized, it is probably because *those concerned have not been "collected."* By way of cultivating an appreciation of this matter, it is suggested that every officer, and certainly every Regular Army officer, be taken out at least once and shot—shot in some non-critical but disabling portion of the anatomy and then left to the tender mercies of an inadequate collecting system. No further demonstration will be required. Those who have already been shot should be detailed to do the shooting."

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RIFLE MARKSMANSHIP TRAINING

(*Continued from page 27*)

almost an impossibility under battle conditions, such as poor light, fog, smoke, stress of battle and other factors, and to pick up a battle target, sighting through it, is an impossibility, or nearly so.

Shortly after the World War rifle ammunition was considerably improved in many respects. The weight of the bullet was increased from 150 grains to 172 grains and boat tailed. Muzzle velocity was increased. The composition on the jacket was changed from cupro nickel to a gilding metal which eliminated metal fouling in the barrel. All these changes made for increased accuracy.

This better ammunition together with improved methods of standardized training increased qualification percentages. About ten years ago these percentages began to reach alarming proportions. Commanders were highly elated and marksmanship training was considered all important, to the almost total exclusion of combat firing. A training center was not established in Nicaragua, although many officers advocated one, commanders probably believed that Marines could hit anything anywhere, anytime, and why not? A casual glance at the high percentages of qualified men would lull most anyone into a false sense of

security. We continued to stress marksmanship more and more, up went scores and qualification percentages. Commanders became more elated, demanding still higher percentages, and in many cases obtained them. This despite the fact that higher scores were required for Expert and Sharpshooter. Then came deflation, in a mild form. We continue to teach our troops the A B C's of rifle shooting. A man in his thirtieth year receives the same training as a man in his second year. Thirty years' service and still in the first grade, in rifle markmanship. Then came the dawn, in part.

A really simple, workable battle sight was developed and adopted by the Corps and its use required in firing rapid fire at 200 and 300 yards in the qualification course. This sight is set at about 300 yards, and considering the flat trajectory of the rifle, is just about perfect. In combat a man can use the battle sight with most excellent results up to about 400 yards. Beyond that range and up to 600 yards, which is about the maximum for Infantry, the open field view can be used by merely raising the sight leaf. This field view sight can be permanently set at around 600 yards. This battle sight was a great improvement and another step in the right direction.

There was a time in the Corps when Rifle Marksmanship training, Division, Marine Corps, San Diego Trophy, and Elliott Trophy Matches seemed to be for the sole purpose of training a ten-man team to win the National Team Match. If this training was correct we must admit it accomplished its mission.

Combat firing is now conducted at San Diego with most excellent results. A very high percentage of hits, under battle conditions, is being obtained, bringing to our attention that the infantryman, with his rifle, is still a very important part of our highly mechanized, specialized, technical and complex war machine.

A few years ago ammunition was being diverted from all channels to qualification firing. This practice is now frowned upon. Now that we are taking up combat firing at one station, why not at others where terrain is available. Even a lowly rifle range is a better combat range than none at all. The suggestion was made several years ago that the range at Quantico might be made available for combat firing. The answer was that the range was in use for qualification firing during all months of clement weather. I consider the range at Quantico suitable for combat firing. It has a beach where landings can be made. There are swamps, woods, hills, small streams, thick underbrush, meadows, a polo field, and corridors. In fact nearly everything required and certainly better than the present combat field where firing is dangerous.

In order to conduct combat firing annually a scheme something like this is offered. Fire the Qualification course the first two years of a first enlistment and the first year of all succeeding enlistments, and combat firing the remaining years. The target season and the combat season would then be split up, about 50-50. The ammunition saved on the qualification course

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could be used for combat firing and if desired there would be no increase in the ammunition expenditure for the year.

A word about the National Matches. These matches are primarily intended for the citizen soldier, National Guard, Organized Reserve, Citizens Military Training Camp, Reserve Officers Training Corps and the individual civilian who likes to shoot. It is this group of taxpayer voters who demand and get these matches. It is also important that the regular services have teams attend these matches in the role of a laboratory or proving ground unit in order to further develop training methods, and improve the rifle and ammunition. All shooters who enter these matches are required to attend and graduate from the Small Arms Firing School in order that they may become qualified instructors in small arms. This is important from a National Defense point of view. It may be assumed that the Marine Corps will continue to enter a team in these matches and once entering we should strive to win the National Rifle Team Match as has been done for years.

I believe that we can continue to win this match, even though we fired the present qualification course but once an enlistment and combat firing the remaining years of each enlistment. Target practice firing is something like this:

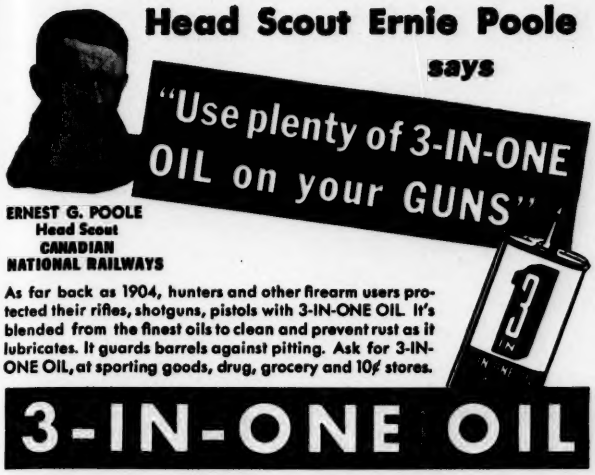
Sights are blackened, and set with a micrometer sight adjuster, consult score book, study wind and temperature and apply corrections to sight; shoulder and elbow pads used, use a sling, select a flat even part of a sodded firing point; take up a precise position, check sights again, study wind again, consult score book again, wait until the light is just right, aim, hold the breath; aim again and finally squeeze the trigger. In addition there must be a black bull's eye on a buff background and not moving. Combat firing is something like this:

Sights not blackened, sights always set for immediate use, temperature and wind not considered, no pads, sling may or may not be used; position assumed as dictated by the terrain and the enemy and is hastily assumed, trigger is squeezed rapidly; target often poorly designated and only outlined by brush, light smoke or a terrain feature.

Any man who can fire the qualification course well can also fire a combat course well, but until he has been so trained is almost as poor as a poor shooter. This we have learned from the courses of fire developed for the Federal Bureau of Investigation. The first few times over these courses our good shooters clearly demonstrated that we fired too deliberately and a moving target or a moving situation was most confusing to us.

In our individual marksmanship course we have probably introduced as many artificialities as we have in some of our map problems.

In conclusion may I ask that we consider making this a Corps of combat riflemen as well as match riflemen.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MARINE CORPS COMMUNICATIONS

(*Continued from page 29*)

United States, if turned over to the Marine Corps by the Navy would be of inestimable value in training and also in keeping good operators in training for supervisors. In this way many of our senior non-commissioned officers would have a chance to gain valuable experience for which it is now necessary to go to the radio stations in China.

Along training lines all signal officers should try to see that the best non-commissioned officers are sent to be instructors in the various schools run by the First and Second Signal Companies. Only in this way will the maximum results be obtained and the best trained students be returned to the various active signal units.

Equipment—Not much need be said about equipment because it has improved so much that there is no comparison between what is used now and what was available a few years ago. Too much credit cannot be given for the fine equipment now on hand and being issued.

There is a definite trend in the right direction for simplicity, durability and compactness for all field equipment. Another big factor is that the personnel of today are trained to handle the equipment and thus insure greater efficiency with economy.

One thing that must be guarded against is getting too much equipment in small units and thereby decreasing their mobility. The small unit must move leaving the large units to care for the special services that may be required.

One section that is often overlooked by even signal officers is the message center. This is a very important section as it coordinates all the others. Under actual combat conditions the Message Center Chief will have great responsibility. The officers will be busy and away most of the times and the handling of messages and seeing they are delivered in an expeditious manner devolves

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on the Message Center Chief. He is required to designate the method to use for transmission and keep a follow-up system to see that the message is actually delivered. In peace-time maneuvers he should be required, for training, to actually go through all the steps that actual combat would require. An efficient man is required and a sergeant is not too high a rank for the job. He should have other qualifications to be an efficient Message Center Chief.

Specialist Pay—Specialist pay sometimes causes more harm in destroying morale than it does good. When signal troops become efficient according to a set standard, it would be preferable to promote them instead of giving specialist pay. The specialists allowed are hardly ever enough for the fair distribution to all efficient men. This makes it necessary for the Commanding Officer to designate those to receive the extra pay. This is many times hard to do where there are several men with about equal ability.

The better method would be to increase the ranks of Corporal and Sergeant, keeping the standard for promotion high as at present. In this way the best men get the rank and pay and carry the promotion to their next station. This would make for greater efficiency and higher morale and the cost would probably be very little more.

The only jobs where specialist pay would appear to be in order is in the Automatic Telephone Exchange in Quantico. The jobs of cable splicer and inside and outside maintenance men require a high degree of skill, but Quantico is the only place where they are really needed. An amount of money as specialist on certain jobs could be determined, and the man holding that job would receive it while on the detail. He would, of course, lose it when transferred.

The thoughts and suggestions in this article are only the ideas of one person, but it is believed that if all ideas were consolidated that means of improving the communication service to the line troops could be evolved.

THE SECOND CONQUEST OF PERU

(*Continued from page 32*)

General Escala, however, did not take up his cudgels too precipitately. Discretion became the better part of his valor as the steaming spray of the surf became plainly visible in the bright sunlight. A steam launch was ordered out from the *Amazonas* with a group of staff officers. Approaching as closely to the shore as they dared, the officers surveyed the rocky coast for possible landing places. It was direct beach reconnaissance under the open eyes of the enemy.

One hour later the launch had its information, returned to the transports, and at 0905 the landing boats started in, guided by the launch.

This first wave was composed of 17 boats in line formation. As they neared the north beach the enemy, well entrenched behind the rocks, cut loose with a murderous fire. The line wavered and buckled.

At this point of the battle, Sir William Glowes writes that the attacking boats were turned back. So does Lieutenant T. B. M. Mason, U.S.N. (on whom Sir Glowes is chiefly dependent for his information) in his official report of the battle. On the other hand, though I find evidence of confusion on the part of the attacking boats, I find no admission of a failure to land on the north beach in the account of General Escala, as the warships advanced upon signal once more to the attack, opened fire, and flattened down the allied resistance. A rapid firing gun mounted in the bow of one of the boats also seems to have helped considerably in preserving the attack.

The *Zapadores,* specially trained for the amphibious operations, were the first to land, and, though a small unit, turned the extreme right flank of the allied line and prepared the way for the Atacama Regiment to start straight up the slope when it landed at 0945.

At 10.30 the Second Division landed. The beach resistance crumbled before this new wave of man-power and was washed up to the railway line. It is said that even the Chilean sailors, caught with the tide of success, foolishly abandoned their boats (thus delaying subsequent landings) and aided in carrying the fight up the cliff.

Meanwhile, the First Division was dispatched to Junin. Both Sir Glowes and Lieutenant Mason attach the greatest importance to the dispatch of this division to Junin, for according to them the original strategy of the battle was to land a small holding force at Pisagua while the main attack was to be made on undefended Junin, six miles south of Pisagua, from where that force was to advance, flank the bluffs and catch the allies in the rear. That explanation of the plan of combat is undoubtedly good strategy, but it does not seem to have been the strategy of General Escala. In Escala's initial orders, the 2d, 3d, the 4th Divisions, totalling 4,890 men, were definitely assigned to Pisagua; the 1st Division, composed of 2,175 men, was alone assigned to Junin. Some 2,500 troops were without committed objectives and were to be used as circumstances dictated. That would seem to be the basic strategy of the Chilean commander,—to exploit the landing where the advance had best progressed—a good use for reserves. And that is exactly what occurred. By mid-afternoon the heights of Pisagua had been scaled, 5,000 men were on shore, and the allies were in flight. When the force which had landed in Junin arrived the next day they found their Chilean comrades in complete possession of the area.

In review, it is interesting to analyze the reasons for such a complete success:

(1) Poorly equipped, poorly trained Bolivian and Peruvian forces, who failed to seize the advantage of a naturally strong position.

(2) Complete destruction of the major defending batteries by the Chilean warships.

(3) The timely assistance rendered by the warships when the attack was in danger of stalling.

(4) Personal reconnaissance of the coast before the landing was attempted.

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(5) The splendid enthusiasm of the Chilean troops and the will and ability to exploit break-throughs.

(6) A 10 to 1 superiority in numbers.

The landing itself was, however, only the opening wedge to an important campaign which followed. Pushing inland, the Chilenos decisively defeated the allies at San Francisco, captured the Province of Tarapacá, practically forced Bolivia out of the war, and caused the evacuation of Iquiqui, important port south of Pisagua and itself a valuable naval base for the Chilean Navy and expeditionary force.

However, wars do not usually end with the attainment of the specific objective over which the war is being waged. One nation's will must be completely imposed upon the other before either is ready to cease hostilities. Such was the case at this time. Peru and Bolivia still maintained misguided hopes and no plans for the recapture of the lost territory, and Chile had better-founded hopes and plans of carrying the war into southern and central Peru.

Thus, as the war entered its second phase, the Chileans turned their attention to Arica, largest and most important coastal city of southern Peru, port of entry to Tacna, and a step closer to Lima, "ancient city of kings" and nerve center of the nation.

The Arica-Tacna Campaign

With exquisite manners for a victorious military machine, the appetite of the Chilean armed forces did not exceed its military digestion. The Arica-Tacna area was wisely chosen as the next portion of Peru to be nibbled off. With the ports of Pisagua and Iquiqui in their possession, the Chileans were in position to move their base northward from Antofagasta to these two places and to prepare there an expeditionary army of 17,000 men as the summer wore on. While the army rested and prepared for the coming campaign, the navy continued its blockade of Peruvian ports and practically ended all aid in munitions to Peru's sorely pressed Army.

Arica was the second most strongly defended port of Peru. It did not lend itself readily to frontal attack from the sea. On the south side of the city a 400 foot cliff broke almost vertically from the sea to form the western extension of a ridge which ran inland more or less southeastward. Crowning the summit of this cliff was the Morro, a nine-gun fort which faced seaward. Protecting its rear a mile to the southeastward, along the ridge, were two sandbag forts, each with four guns. North of the town were three batteries set close to the water's edge. From the right flank of the northernmost fort a line of trenches extended from the sea southeastward and approached to within a half mile of the easternmost fort. Finally, under the protecting guns of the Morro and the three batteries along the coast, was the *Manco Capac,* a U. S. built harbor monitor, which mounted two 15 in. smooth-bore, muzzle-loading Dahlgrens in turrets. Thus Arica was practically enveloped by fortifications, but unfortunately for the defense of the city the greater weight of these defenses was towards the sea. Two sandbag forts and a line of trenches were the only protective measures taken to guard the rear and northern approaches of the city.

Entrusted with the defense of Arica was Admiral Montero, commanding 4,000 men. Cooperating with him was General Daza, commanding a force of 3,000 troops with headquarters in Tacna, just north of the coastal city.

The Chilean plan, therefore, resolved itself into the task of cutting all communications, destroying the forces at isolated positions and at Tacna, and of forcing the port of Arica from the rear.

Two landing places were chosen, both north of Arica and both undefended. The first of these, Pacocha, was approximately 80 miles up the coast from Arica but it held the strategic key of railroad communication with the city of Moquegua and the Titicacan uplands. Nine thousand six hundred troops were landed at this port on the 25th of February. The other landing point, Vitor, was twenty miles closer to Arica, and here 3,000 troops were landed. After the troop disembarkations the transports and supply ships journeyed back to Pisagua, loaded with water, supplies and other provisions, and returned to Pacocha to prepare the Army for its operations ashore. These movements of the Navy were carried on with impunity because not even one Peruvian warship remained on the high seas to challenge the Chilean sea lines of communication.

While these landings were taking place and in progress of organization ashore, the warships blockading Arica cooperated nobly by staging an energetic demonstration which caused Admiral Montero to reconsider any plan he might have entertained of sending reinforcements to the garrison at Moquegua.

Colonel Gamorro at this latter place with 2,000 troops constituted a threat to the eastern flank and rear of the Chilean approach to Tacna and Arica. Thus, Moquegua became the first objective. At the famous battle of Los Angeles, this force of Colonel Gamorro's was soundly defeated, and on the 12th of April the Chileans started the difficult trek across desert land to Tacna.

In the meantime, a small Marine Corps expeditionary force had been dispatched to Mollendo. After overcoming a brief, spiritless resistance, the city was captured and all danger from that direction was removed.

As the advance moved southward from Pacocha, the maritime base of operations was transferred to Ite, 24 miles by good road westward of Sama, from where the main attack was to be launched.

General Campero, President of Bolivia, had in the meantime come up from the southeast and had joined up wtih General Daza to take command of the Tacna garrison, which had now swollen to 14,000. The position he chose to defend was to the northwest of that city in the arid sand hills, with two deep ravines falling off on the flanks and the high points commanding the approaches to Tacna. He had chosen his terrain well, but terrain, as at Pisagua, was not enough.

The battle began well for the allies, and for a few brief moments it seemed as if the Chileans had spent all their power in a futile frontal assault of the strong position. However, at that critical moment, the Marines of the 3d Division were successful in turning the right flank and the tide of the battle. The resulting rout presaged

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the fall of Arica, though its defense was to be high tribute to Peruvian courage.

Caught between the pincers—the Navy on one side and the Army on the other—the Peruvian choice was limited to surrender, or to fight and die. They chose the latter.

At dawn on the 6th of June the field pieces of the Chileans opened at 7,000 yards. They were, however, no match for the heavier batteries of the Peruvians and the Navy was forced to come to the aid of the land forces. Swinging close inshore, the *Covadonga, Almirante Cochrane, Magallanes* and *Loa* bombarded the forts. Ill luck rode with the *Covadonga* and the *Cochrane,* as both received considerable damage in retaliation, but the energetic demonstration served its purpose. The Army of occupation was enabled to deploy without danger for the final attack.

Looking from the Morro that night, the Peruvians saw to the north the glow of the enemy's camp fires and felt secure in the fastness of their forts and entrenchments and confident in their artillery. But never neglectful of even such primary precautions as patrols and sentries, they had permitted the Chileans to advance on a soldier's old trick until two battalions were within a stone's throw of the northern forts and another regiment within an equally short distance from the east forts. Dawn brought the assault and the final chapter in the defense of Arica. The Lautoro Regiment swept through the northern forts; the 1st Regulars captured with ease the east fort and pushed on towards the citadel; and the Chilean artillery pounded at the line of entrenchments which had been crossed on both flanks. Colonel Bolognesi, fighting with all the gallantry and courage befitting a great soldier, with his back to the sea, refused to surrender, and contested every foot of the Morro in a battle that asked or gave no quarter. However, there was no answer to the superiority in numbers and equipment, and by noon the heights had been captured.

Thus, the second major objective of the Chileans had been won.

This particular campaign seems to have been characterized on the part of the Chileans by an unusually well conceived plan of operations, close attention to the system of supply, and a careful liquidation of any possible trouble on their exposed flanks. Although not distinguished by landing force operations against beach opposition, the expedition was wholly dependent upon the cooperation extended by the Navy, which cooperation did not end merely in transport and supply duty, but in well-timed demonstrations also. Altogether it was a fine example of how coordinated, well-directed forces can bag a cat by grabbing it by the tail and thus avoiding its claws.

The Callao-Lima Campaign

As the main portion of the Army rested on its laurels for the final effort of the war, the Navy resumed its tactics of harassing the Peruvian ports. Callao bore the brunt of these skirmishes. Gateway to Lima and sheltering harbor for the badly decimated Peruvian fleet of torpedo boats and gunboats, it was the most important port of Peru, but still not important enough for Admiral Riveros to risk his ships against the semi-circle of forts

which stretched from La Punta to the Rimac River. Five times the forts and Peruvian ships behind the mole suffered bombardment, but these demonstrations only revealed the extreme range of the Chilean ship artillery, the wholesome fear of the Chilean high command for Peruvian torpedoes, and their confidence in the ultimate fall of the city.

Meanwhile, the irrepressible Captain Patricio Lynch began his landing force raids on the north coast of Peru. Sweeping inland from Chimbote and other places he struck at the northern provinces, but aside from creating a measure of diversion he achieved no military objective.

Lima remained the objective and all other operations were subordinate to it.

Callao, like Arica, did not offer opportunity for direct investment from the sea. Facing the city at a distance of four miles was the barren island of San Lorenzo. A Chilean force of 2,000 men had been landed without resistance on this island in the month of November, but the defenses of Callao still guaranteed the inviolability of the mainland beaches.

Previous experience had indicated to Admiral Riveros that the shore artillery, combined with the danger of mines and torpedoes, made it impossible for him to blast a way to the beaches along the Rimac, La Punta peninsula, or on Miraflores Bay, without serious danger to his ships and without great jeopardy to the landing force. All along the sand spit which formed the southern side of Callao Bay were 20 in. batteries which commanded Callao Bay and its beaches, Boqueron Passage, and Miraflores Bay and its beaches. Close to the Rimac River, and even along the town itself, were other batteries. He saw clearly no hope of a successful landing in the face of such a rim of fire power.

Lines of communication, the terrain, and the experience of Arica indicated the landing place.

On the 18th of November the First Division, 8,241 men, then under General Villegran, landed at Pisco, 150 miles south of Callao, to be joined on the 1st of December by the 1st Brigade of the Second Division. Always careful of their rear and flanks the 2nd Brigade of the First Division was first dispatched to Ica, 45 miles inland on the railroad, where the Peruvian force defending that place was defeated.

In order to paralyze all possible assistance to Lima from the area to the south, Colonel Lynch's brigade of the First Division was next ordered north overland by the beach road. A small steamer, the *Gaviota,* kept pace with the marching columns and landed supplies and water at the camp sites in an example of admirable cooperation, possible only with absolute command of the sea.

In the meantime, the Second Division, General Sotomayor commanding, had re-embarked at Pisco, and together with the Third Division and Reserves, a total force of 15,388 men, were landed at Curayaco and Chila, 40 miles south of Callao.

Lieutenant Mason in his official report states: "The landing was very expeditiously carried out, the regular ships' boats being assisted by the large floats which most of the ships carried, these being capable of carrying 100 men at a time, with all their belongings."

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As the Peruvians prepared their defensive lines and as the Chileans advanced, Lieutenant Mason's apt remark is most explanatory of what could have been expected to occur. "The ignorance of the Peruvians in regard to the force, position, and movements of their enemy seems almost marvelous. With the exception of the reconnaissance down the Atocongo Pass, in which he (General Pierola, commanding the Peruvian forces) satisfied himself that the very road by which the Chileans advanced was impassable, he never moved beyond his lines."

It is not proposed to go into the details of the defense and capture of Lima. What followed after the landing at Chilca and Curayaco was strictly land warfare, with the Chilean Navy playing no active part until the second phase of the battle was reached. It is believed sufficient merely to say that continuing Peruvian utter disregard for the principles of security, a steadfast defeatist attitude, and poor equipment (the naval blockade had a telling effect on supplies to the Peruvian Army), all contributed to the fall of the city despite General Pierola's excellent selection of a main line of resistance. This line extending on the crest of hills from Punta Chorillos to the Andes coastal range, a distance of eight miles, held up on the flanks, as the defending general expected, but cracked wide open in the center, which he did not expect. The result was that the Peruvians were thrown back to Chorillos and to the Reserve Line north of that town, after heavy losses. Taking advantage of the disorganization of both sides, neutrals arranged for an Armistice. However, someone in the Peruvian Naval Brigade failed to get the word. Opening fire on the Chileans, they began the battle anew. Immediately the Chilean fleet came to the support of the surprised Army. With their guns enfilading the Peruvian line and pounding at the town of Miraflores, they helped hold the Peruvian right until the Chilean Army picked up cohesion and momentum and turned the left, doubling it back. By five o'clock P. M. the Peruvian Army was in flight, a thoroughly beaten force. The way to Lima was at last open.

On the 17th of January, Lima formally surrendered to General Saavedra, Inspector-General of the Chilean Army, and the War of the Pacific was at an end. Chile's complete supremacy at sea, her well-conceived landing force expeditions, and the successful operations of her Army on shore had made possible the Second Conquest of Peru. Sea power alone could not have forced the decision; sea power cooperating with land forces determined the victory.

CORRECTION

The article "Collaboration of The Navy with The Army," published in the September issue of the GAZETTE, should have shown Admiral Giamberardino as the author and Lt. Col. P. A. Del Valle, U.S.M.C., as the translator. The GAZETTE regrets this error and extends its sincere apology to Admiral Giamberardino.—ED.

HAVE YOU PAID YOUR DUES TO THE ASSOCIATION?

ARMY INDUSTRIAL COLLEGE

(*Continued from page 34*)

Normal attrition has taken its toll. In the Marine Corps one graduate has died and three have retired, leaving seventeen available for peace-time duties, or twenty in an emergency.

The course of instruction is divided into academic work, at the beginning of the course, and individual and committee problems for the remainder of the year. The last problem is a war game of one week's duration, students are designated as occupying the key positions of the nation at war, both civilian and military, and a graphic test of the mechanics of the system of industrial mobilization in general and an illustration of the individual students' grasp of the specific problems presented is obtained.

Throughout the course lectures by distinguished citizens, officers of the services and by experts in various fields are given to the class. These lectures are, in themselves, worth the time of attendance. The caliber of those who lecture is such that one could not obtain, for money, the privilege of listening to them, for they are not paid speakers. In all cases they appear at their own expense and solely through a spirit of patriotism and profound interest in the defense measures being undertaken. Many of them were important figures during the World War, while all are prominent in the affairs of today.

Also, throughout the course inspection trips are made to various industrial plants and to service establishments, such as the Navy Yard, Aberdeen Proving Ground, Indian Head, Camp Holabird, Fort Meade, etc., culminating in a tour of the Pittsburgh industrial area lasting a week.

The course consists of forty-six problems, so called, as follows:

Problem No. 1—Fundamentals of Business—is class room instruction for a period of about seven weeks and it is divided into five sections. Section 1 deals with general economics, Section 2 with statistics as applied to business and finance, Section 3 with private and public finance, Section 4 with financial and cost accounting. Section 5 is a study of production, organization and business problems of industry in general. In the statistics section the student finds use for the mathematics that most of us forgot after passing our entrance examinations. A review of them prior to beginning the course will be of value. Also in this section the student gets acquainted with the technique of drawing charts and graphs, of which he is required to make many before the course is completed. This part of the course has been adapted from the instruction methods of the Harvard School of Business Administration and was outlined by the faculty of that school. Also during this period the students receive instruction in report writing, which follows the Harvard system and Army Regulations. The Navy and Marine officers find this completely new to them and are apt to take exception, among themselves at least, to the rigidity of the requirements governing form, paragraphing, underlining of headings and sub-headings, indentions, etc. The

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Army, however, is satisfied with the system as is and shows no inclination to change it.

Problem No. 2—Aanalysis of Basic Industries—is a group of committee studies, and usually covers the ten most essential industries. This group requires three weeks of study, research and report writing. Each member of a committee is assigned one or more sections of the problem by the committee chairman, also a student, and is held responsible for the preparation of that part of the report, and for a five-minute presentation of the salient points to the assembled class. After the committee presentation is completed there is a discussion period by the faculty, the class and by visitors. It behooves the student to thoroughly comprehend his subject, for the questions are searching and critical. Each student is, some time during the course, a committee chairman and has the additional responsibilities of organizing the committee efforts, making the necessary outside contacts, timing of the presentations and assembling the committee report. When there is one Marine Corps student he is chairman of the Publicity Committee, and when there are two, one has this committee. Due to the traditional modesty of the Marine Corps as a whole this assignment is difficult for the individual Marine Corps officer to fulfill. (True or false?) He may or may not be chairman of another committee, depending upon the total number of students and his special qualifications, if any, in certain subjects.

The presentations from the platform are increased in time of delivery from five minutes for the first one to twenty or twenty-five minutes for subsequent ones. The student is marked on his platform manner, knowledge of his problem, diction and voice.

The committee problems train the student in logical thinking, in report writing and in the fundamentals of public speaking. All these are of great value and usually are not acquired by any officer solely through his own initiative or in the ordinary routine of the services.

Preceding each problem, either individual or committee, the faculty issues a written directive, which outlines the scope of the problem, gives the known references and where they may be consulted, the study time allowed, the date on which the report must be submitted, the name of the instructor in charge, the names of contact officers and officials of government departments and, in committee problems, the names of the chairman and members of the committee.

In addition to the directive there is usually a class room orientation talk on certain problems, given by the instructor in charge of the problem or group of problems.

The instructor in charge is always available for such assistance as may be necessary and makes a preliminary check of the presentations and reports before their final submission, but does *not* direct or interfere with the individual or committee study and research. The student is given every facility for reaching his solutions and can disagree with all previous thought and conclusions without jeopardizing his class standing or friendly relations with the members of the faculty. As a committee

member he may disagree with all other members, in which case he submits and defends a minority report from the platform. In one case last year the *chairman* of the committee disagreed with all other members and presented his own report.

The study rooms and class room seating are rearranged after each problem is completed so that each student becomes well acquainted with all other students before the course is completed, and no cliques are allowed to form.

Problem No. 3—Historical Study—is an individual problem of three weeks' duration. It covers the detailed history of industrial mobilization and procurement by the United States during the World War. It is this problem that impresses the student with our dire condition at that time and with the conviction that we must never be in a similar condition in the future.

Problem No. 4—War and Navy Department Organization and Procurement—is an individual study of procurement organization and procedure of the students' own branch of the service. It lasts two and one-half weeks and enables the student to visualize the breadth of the problem presented to each arm, service and bureau, the methods used and an insight of the war planning sections thereof.

Problems Nos. 5 to 16, inclusive. A group of committee problems lasting three and one-half weeks and covering the following subjects:

5. Basic Plans and Joint Agencies.
6. Industrial War Load and Allocations.
7. Utilization of the Automotive Industry.
8. Procurement Districts and Corps Area Procurement.
9. Inspection in the Procurement Program.
10. Personnel for Procurement in a Major Emergency.
11. War Contract Procedure.
12. Early Production and Improvisation.
13. Construction in War.
14. Ships and Shipping.
15. Strategical and Critical Materials.
16. Control of War Procurement.

Assignments of Navy and Marine Corps officers are usually made to a committee subject of general interest, or of specific interest to the naval service, such as Ships and Shipping, Utilization of the Automotive Industry, etc.

Problem No. 17—Test of War Department Protective Mobilization Plan—is an individual problem lasting two and one-half weeks. It covers in detail certain selected test items and discloses graphically the weakest spots of war procurement planning.

Problem No. 17-A—Procurement Expenditure Program—is a committee problem and is conducted concurrently with Problem No. 17. It covers the money cost of procurement programs.

Problem No. 18—War Procurement—is an individual problem of four weeks' duration and comprises the determination and solution of problems involved in obtaining the munitions required in a major war, and an analysis of peace-time planning and the proposed war-

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time management of the War and Navy Department procurement programs. This is *the* heavy problem of the course.

Problem No. 19—Government—consists of committee problems lasting one and one-half weeks and covers current functions and potential war-time functions of the regular government departments, other than War and Navy, as well as selected executive agencies.

Problems 20 to 31, inclusive, are a group of committee problems lasting three and one-half weeks, as follows:

20. War Powers of President and Congress.
21. Industrial Mobilization Plans.
22. Transition from Peace to War.
23. Licensing of Industry.
24. Public Relations.
25. Trade Organizations and Regimentation.
26. Budgetary Control.
27. Control of Iron and Steel.
28. Neutrality.
29. Control of Economic Resources.
30. Economic Analysis of a Foreign Power.
31. War Trade.

The titles of the above problems are self explanatory.

Problem No. 32—Industrial Staff Memoranda—is of one week's duration and teaches the student the technique of preparing staff memoranda covering procurement planning and industrial mobilization. Also uses up most of his Easter vacation.

Problems 33 to 44, inclusive, is the final group of committee problems lasting three and one-half weeks covering the following subjects:

33. War Finance.
34. War Labor and Man Power.
35. Communications.
36. Transportation.
37. Fuel and Power.
38. Strategic Industrial Areas.
39. Specific Economic Plans.
40. Economic Analysis of Foreign Powers.
41. Industrial Mobilization of a Foreign Power.
42. Priorities.
43. Price and Profit in War.
44. Economic Readjustment.

Problem No. 45—Utilization of War Resources—is an individual problem of three and one-half weeks' duration and is a summary of all the preceding problems. This problem is, in effect, the student's thesis of the course, and it determines his final class standing.

Problem No. 46—War Game—a practical application of the subjects taught. It lasts one week and leaves the final and lasting impression that much as has been accomplished to date, there is still a great deal to be done.

This completes the course, except for the inspection of the Pittsburgh area, the presentation of diplomas to the students' wives, believe it or not, and finally graduation with the presentation of the students' own diplomas.

In conclusion I would like to state that while there are several service schools at home and abroad, which give thorough instruction in purely military subjects, there is only one Army Industrial College in the world.

I wish to thank Lieutenant-Colonel Francis H. Miles, Ordnance Department, U. S. Army, Director of the Army Industrial College, for his approval of, and assistance in, preparation of this article, and to credit Lieutenant-Colonel John C. H. Lee, Corps of Engineers, U. S. Army, for a great deal of material taken from his report dated March 6, 1934.

BOOK REVIEWS

THE RAMPARTS WE WATCH.—By George Fielding Eliot, Major Military Intelligence Reserve. Published by Reynal and Hitchcock, Inc., 386 Fourth Avenue, New York. Price, $3.00.

In this book Major Eliot has presented a comprehensive survey of American Military policy, and a thorough survey of America's position in the Armed World today.

Major Eliot has carefully examined such vital question as: Is America safe from Attack, how large an Army and Navy do we need and how are they to be employed? Are we immune from attack by air? Are our Coast Defenses adequate? What strategy is being depended on? These and many other questions are examined and answered.

The author explodes bombs under the complacent belief that America is impregnable. More than any other of the great powers—we are self sufficient but certainly we are not immune from attack. He maintains our coast defenses are inadequate, that a surprise attack on Panama would cripple our life lines of Naval control.

Major Eliot presents our weakness and our strength in a bold book which should be read by every person interested in the future safety and welfare of our country.

JUNGLE PATROL—By Vic Hurley. Published by E. P. Dutton & Co., 300 Fourth Avenue, New York.

The entertainingly written history of the Philippine Constabulary, brief in time, 1901 to 1936, but filled with illustrious deeds. It is the story of a native police force under American Officers fighting under the creed "To be outnumbered always; to be outfought never," and should be of particular interest to Marine Officers with their experience in the Guardia Nacional, Garde de Haiti, and Dominican Guard.

A few senior officers will undoubtedly remember some of the names of those brave leaders and none will fail to recognize Pershing, Harbord, and Rodman. However the chief concern of the book is with small patrols operating in a wild tropical terrain through swamps and mountains against an enemy drunk with religious fanaticism imbued with the desire to close and fight it out with cold steel. It is the perfect answer to the problem of the necessity for bayonets in "Small Wars." The old drill that will be remembered by those who saw service prior to the World War, "FORM FOR BOLO ATTACK" will require no explanation of its tactical application after reading this book.

To a Corps who prides itself on its knowledge and experience of what we call "Small Wars" this book should be of interest and well worth reading.

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■ The September, 1939, issue of the Command and General Staff School *Quarterly*, appeared in a new format, size 9 inches by 12 inches, which permits the use of large scale sketches and photographs illustrating its many interesting and instructive articles.

The mission of the *Quarterly* is the publication of a systematic review of current military literature, through cataloging articles of professional value, in selected military and naval periodicals, in the domestic and foreign fields.

Articles from foreign periodicals are treated by translation of titles and digests of contents; material of particular importance is covered more extensively in a section of "Foreign Military Digests."

A "Library Bulletin" section lists books, recently accessioned, which are of particular significance.

The *Quarterly* is published as a guide to modern military tendencies and to inspire vigorous thoughts on the subjects treated.

The publishers are to be congratulated; they have provided a magazine of value and merit, profusely illustrated, which should be carefully read by every military man who desires to keep abreast of the rapid changes taking place in the world today.

Paid-Up Insurance

THE Navy Mutual Aid Association took an important step on November 1st, when an ALNAV was despatched to the Service announcing a change to the level premium basis, effective January 1, 1939. The proposed change, which was circulated to the membership on August 13th, received a majority vote of nearly 84 per cent.

The change provides for the enrollment of new members on and after January 1st on a level premium basis for a paid-up benefit of $7,500.00 at ages 60, 65, 70 or 75, as selected by the applicant. The entrance age limit was changed from 35 to 45.

Approximately 6,000 of the Association's present members will be transferred to the level premium on January 1st. The older members who cannot be transferred on an equitable basis will be carried under the present assessment plan, unless they desire to change to the level premium.

Other important changes to the By-Laws of the Association include the option of having the benefit paid on a monthly, quarterly or semi-annual payment basis instead of a lump sum; the privilege of taking a paid-up benefit at any intervening age for a benefit less than $7,500.00, or, of making a cash deposit which in addition to the member's reserve value will provide a single premium to establish a paid-up benefit in any amount not to exceed $7,500.00. The entrance fee of $5.00 will no longer be required.

The Association's Secretary and Treasurer, Captain J. R. Hornberger (SC), U. S. Navy, retired, stated that the principal reason for the change to a level premium basis was to meet changed conditions resulting from recent laws affecting promotion. Naval

Academy graduates no longer seek the cheaper forms of protection, such as term insurance. They desire a type of insurance which will build up substantial paid-up values in the event of premature retirement, and they particularly desire to attain a paid-up status prior to reaching retirement age.

Applications for membership, effective January 1st, are being received on the basis of the registration of an allotment with first payment December, 1938.

The paid-up ages and the monthly rates for a paid-up benefit of $7,500.00 are published hereunder.

Age	*Paid-up at 60*	*Paid-up at 65*	*Paid-up at 70*	*Paid-up at 75*
16	$7.07	$6.87	$6.74	$6.66
17	7.28	7.06	6.93	6.84
18	7.50	7.27	7.11	7.03
19	7.73	7.48	7.32	7.22
20	7.98	7.71	7.53	7.42
21	8.23	7.94	7.74	7.63
22	8.50	8.18	7.97	7.84
23	8.79	8.44	8.21	8.08
24	9.09	8.71	8.46	8.31
25	9.41	8.99	8.72	8.56
26	9.74	9.29	9.00	8.83
27	10.11	9.61	9.29	9.10
28	10.49	9.95	9.60	9.39
29	10.91	10.31	9.93	9.71
30	11.36	10.70	10.28	10.04
31	11.84	11.11	10.66	10.39
32	12.36	11.56	11.06	10.76
33	12.93	12.03	11.48	11.16
34	13.54	12.54	11.93	11.58
35	14.20	13.09	12.42	12.03
36	14.92	13.68	12.93	12.51
37	15.71	14.31	13.49	13.01
38	16.56	14.99	14.08	13.55
39	17.50	15.73	14.70	14.13
40	18.53	16.53	15.38	14.73
41	19.66	17.38	16.09	15.38
42	20.92	18.31	16.86	16.07
43	22.32	19.33	17.69	16.80
44	23.88	20.43	18.58	17.58
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SOME QUALIFICATIONS FOR LEADERSHIP AND COMMAND

(*Continued from page* 16)

command. He who aspires to succeed must train his mind, develop his character and the qualities of leadership so necessary for success. Every officer is, or should be, properly ambitious. He should leave no stone unturned to develop himself in every desirable characteristic of which he is capable. It requires a lifetime of conscientious study and attention to duty to qualify for the efficient carrying out of these functions. General McGlachlin expresses the following thought with regard to the functions of Command: "The good commander governs; he directs his unit materially, morally, and technically; he foresees its needs, secures its rights, sees that it performs its duties, he reflects on measures to be taken, and supervises the service, good order, conduct, training, and education of his men; he is their guide, their advisor; in difficult times he imposes upon them the quality of coolness by his own intrepidity; he determines and makes certain the functioning of his organization."

Alexander Hamilton thus defines a perfect officer:

"He who combines the genius of the general with the patient endurance, both mental and physical, of the private; who inspires confidence in himself and in all under him; who is at all times a gentleman, courteous alike to inferior, equal, and superior; who is strong and firm in discipline, without arrogance or harshness, and never familiar toward his subordinates but to all is the soul of courtesy, kind, considerate, and just."

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THE HORSE IN MODERN MILITARY ORGANIZATION

(Continued from page 36)

Although the differences in political and economic thought of Germany and Russia serves to permeate into practically all phases of the life of the two nations, there is one point on which they tend to agree. Russia, like Germany, bases military field reconnaissance upon horse cavalry. Each infantry regiment, according to "Revue d'Infanterie" has a mounted platoon.

Developed independently by nations with opposing trends of thought, the utilization of mounted units throughout the German and Russian infantry forces at least tends to substantiate a need for experimentation along these lines for our own infantry units.

Back in the early 19th century, when Napoleon was making his dismal retreat from Moscow, hampered by the snows of an untimely winter, and the well timed attacks of charging Cossacks, he continually mentioned the fact that the situation would have been vastly changed if his orders had been carried out for the furnishing of Polish cavalry. Napoleon recognized a fact that has been generally conceded in military circles, that the Poles were among the greatest cavalrymen of Europe.

Today, as then, the Polish army regards horse cavalry as a principal arm of the military machine. Poland, from the strategic standpoint, can expect a quick victory or defeat. Nestled as she is, between the boundaries of opposing powers, she can anticipate giving or receiving swift attacks. There will be no time for large scale stabilization before the fate of Poland is decided.

Peace time organization of the Polish cavalry, according to "Wissen and Wehr," Berlin, October, 1937, provides for 40 cavalry regiments, organized into one cavalry division and 12 independent cavalry brigades. In the event of war, it is planned that armored cars and tanks be added to operate in combination with the horse cavalry.

The proposal for combined action of horse and mechanized units opens a field for constructive experimentation. Pointing to the actual instances where combined horse and tank attacks were successful in the World War, there are several reasons to believe that tanks, rather than eliminating horse units, have increased the value of mounted forces, in that both mechanized units and cavalry can operate in mutual support in an attack.

Generally speaking, a tank or armored car becomes increasingly vulnerable as it slows its speed while under enemy fire.

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Consequently, if tanks are used to precede an infantry attack, they must either cover the ground at a speed that will reduce their vulnerability, and at the same time so completely outdistance the infantry as to be of little use as a covering force, or they will have to reduce speed to stay with the infantry units and thus diminish their effectiveness. In either case, the difference in the relative ground covering speed of mechanized and foot units raises severe questions as to the practicability of their effectiveness in a combined assault.

On the other hand, cavalry, possessing a far greater maneuvering and ground covering speed than infantry, can operate sufficiently fast to keep within effective distance of attached tanks in any normal maneuver or attack. With tanks preceeding a mounted attack, opening holes in wire, and reducing enemy machine guns, cavalry would provide the means with which to quickly get manpower and fire power through any gaps in the enemy line and exploit even the temporary advantages.

The recently completed Third Army maneuvers held in the region of San Antonio, Texas, refutes the charge that horse cavalry will suffer excessively high attrition in modern combat. The data on the maneuvers, published in the August 27 "Army and Navy Register," lists all infantry losses at 17 per cent and all cavalry losses at 17 per cent. Of major interest was the information that scout car, or vehicular losses totaled 140 per cent. To many, the favorable comparative losses of infantry and cavalry was no surprise, and the excessive vehicle loss merely tended to substantiate the reports from the Chinese and Spanish war fronts.

American cavalry, no longer armed with the saber, but rather with the automatic pistol, will show itself to be a deadly force in close combat. With radio equipment both for horse and motor units, the age old problem of controlling cavalry in the field is well on its way toward a solution.

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see the manner in which cavalry has kept pace with the trend toward greater fire power. How different the present day armament is than at the opening of the war, when for instance, General Sordet's famed French cavalry went into action with two machine guns to a brigade.

And today, wherever there is conflict it is the same old story. Cavalry is still an effective combat weapon. In Spain, it is the Moorish cavalry and Monasterio's Column. In the Japanese campaign in the north, General Terauchi's 20,000 horsemen carried the objectives when the mechanized units bogged down with rain and mud. When Blucher's Russian Eastern Army began to move into the region of Chankufeng Hill as the Russian-Japanese hostilities continued to grow, the first despatches from the war zone reported the cavalry columns moving up.

Mechanizations and machine guns are here to stay. But the horse has not departed from his important place in the armed forces, and it is quite possible that this importance is on the increase rather than the wane.

Might it not be advisable to become better acquainted with cavalry abilities and limitations? In any possible defensive war on this continent, we may well expect to see cavalry assuming a major role while operating with other branches.

For wasn't it Pershing who said, "In any future war on the American continent, the use of cavalry will be as important as it has been in the past."

MARINE CORPS SPRIT IN 1800

Camp Washington, Sept. 22, 1800.

Lt. Henery Caldwell,

Sir:

When I answered your letter I did not know what injuries you had received on board the *Trumbull,* as you did not inform me. Yesterday the Secretary told me that he understood one of the Lieutenants of the Navy had struck you, I lament the Capt. of your ship cannot keep order on board of her. It would be proper that all of you who feel injured should draw up a spirited Address to the Secretary of the Navy, request a Court Martial, that if the Fellow deserves it, he may be discharg'd the Navy. As for yourself I can only say, that a Blow ought never to be forgiven, and without you wipe away this Insult offered to the Marine Corps, you cannot expect to join our Officers. I have permitted you to leave the ship, after settling the pay of the Marines, etc., that you may be on an equal footing with the Captain, or any one who dares insult you, or the Corps. I have wrote to Capt. Cormick, who is at Boston, to call on you to be your Friend. He is a Man of Spirit, and will take care of you, but don't let me see you 'till you have wip'd away this Disgrace. It is my Duty to support my Officers and I will do it with my Life, but they must deserve it. On board the *Ganges,* about 12 Mos. ago, Lt. Gale was struck by an Officer

of the Navy, the Capt. took no notice of the Business and Gale got no satisfaction on the Cruise: the moment he arrived he call'd the Lieut. out, and shot him: afterwards politeness was restored.

I expect you will receive by this post, 1200$ remitted you by the Treasurer of the United States.

Y. obed. Srvt.
W. W. B.,
Lt. Col. Commandant,
M. C.

Address of the Honorable Sumner Welles, Under Secretary of State, Sunday, November 6, 1938, over the facilities of the National Broadcasting Company, 7:00 P. M., E.S.T.

I WELCOME the opportunity which I have been afforded to participate in this series of broadcasts, together with some of my friends from the other American republics, in what I believe to be a most commendable effort to emphasize to the people of all of the Americas the ever-increasing value of our inter-American relations.

The Inter-American Conference which is to convene at Lima on December 9 will be of outstanding importance. The world situation today makes it necessary as never before that there should not exist between the American republics any shadow of misunderstanding or suspicion in their common relations, and that the difficulties which may still exist between some of them be solved in that spirit of friendly tolerance, and of mutual forbearance, which I am glad to say is becoming proverbial in our inter-American life.

The preservation of peace, the revitalization of international law, the settlement through pacific negotiation of international differences, the removal of trade barriers, and equality of commercial opportunity among nations, are all of them fundamentals of inter-American policy. These fundamentals must be understood and supported by a strong public opinion, not only as abstract principles, but in practical application, if they are to become an effective force in assuring peaceful and understanding relations among our nations. At a time of great crisis not many weeks ago, a practical demonstration was given to the world of the great moral force that can be exercised by public opinion. The unanimous appeal of the 21 American republics for the maintenance of peace in Europe cannot be over-estimated in its effect.

The American republics today are bound more closely together by understanding and by identity of purpose than they have ever been in their history, but that relationship is clearly something that by its very nature cannot remain static. It requires the will for betterment, for enhancement, for perfection, not only on the part of the governments of our republics, but on the part of the 21 American peoples to whom their governments are responsive. On this continent we have had an exceptional opportunity to establish an order based upon justice and upon law, and it is clear to all of us that we are making progress in taking advantage of that opportunity. Permanent peace will come only when nations observe the sanctity of the pledged word, when they refrain from intervention in the internal affairs of other countries, when they settle their disputes by peaceful means, when they make necessary adjustments and revisions of treaties and agreements in a spirit of equity, rather than by the use of force or the threat of force, and when all nations respect the just rights of others in the same measure in which they expect their own just rights to be observed.

We in the Americas still have much to do to carry out and to perfect the implementation of these principles, but we can also take heart from a most encouraging record of accomplishment. The action taken at the Inter-American Conferences in Montevideo in 1933, and at Buenos Aires in 1936, resulted in the perfection and strengthening of our peace machinery, and in the reassertion of the application of the principles of equality of treatment and fair dealing among nations. The American republics have assumed many obligations under a series of treaties and conventions which govern certain phases of their relations with each other, and they have established an enviable record in the observance of those obligations. They accept the principle of the pacific settlement of international differences and have loyally and repeatedly observed that principle in practice and only recently—and I refer, of course, to the settlement of the Chaco dispute—they have successfully demonstrated that even in international disputes which have culminated in armed strife, the will for pacific negotiation, facilitated and encouraged by impartial and friendly neighbors, can result in a fair and just peace, and a peace which has not been imposed, but one which has been freely negotiated.

Our own Government is giving constant and increasing attention to a broad program of inter-American cooperation. All of the interested governmental departments and agencies are contributing to this effort. We are fully alive to the natural ties and mutual interests existing among the American republics and we are making every effort to strengthen those ties and to develop those interests. Specific projects dealing with many subjects in the economic, financial, social, and educational fields are under study and will be carried out as expeditiously as possible. The other American nations show the same interest and desire for such healthy cooperation as is shown here in the United States. Private initiative and effort in this important phase of inter-American relations will be especially helpful. Our own Government is meeting with the most generous response from private organizations and individuals in this country who have been requested to contribute to the general effort in this broad field of our continental relationships.

And underlying all of the complex pattern of international relations is the basic need for a real understanding among peoples. No specific problems can be permanently and satisfactorily solved unless there is knowledge and sympathetic understanding among all of us of the national lives, the needs and the aspirations of the others. We are fortunate in this hemisphere in having at hand instruments for bringing about this understanding. There are the innumerable daily contacts arising from business, trade, travel, education, and the many other varied activities of common interest. These, of course, must be stimulated and increased.

Periodic meetings of representatives of the several governments, such as the coming conference at Lima, give the opportunity to exchange views, to perfect organization and procedure, and to discuss in a frank and friendly manner our problems and the possible solutions for them.

The system of consultation and cooperation which crystallized in such an initially satisfactory form in the last Inter-American Conference at Buenos Aires indicates, I believe, the course which we must pursue in our inter-American relations in order to achieve the objectives we have set for ourselves. It has already been proved good in practice. It holds even greater promise for the future.

That it be strengthened and upheld is of vital importance to every one of our nations. Our respective freedom, independence, and future welfare may depend upon our continued solidarity. Just two years ago the American republics in a joint declaration unanimously proclaimed that any threat to the peace of any one of the American republics was a threat to the peace of all of them and justified immediate consultation between them all.

Not only the physical integrity of the nations of the New World, but the security of the individual rights and liberties of their citizens may also depend upon the maintenance of that relationship. At this epoch in the history of the world, the doctrine of hatred is threatening civilization. You can see it extending its influence month by month, day by day, as its shadow darkens more and more of the face of the earth. How can there be peace in the world, as the President said the other night, if the reign of law is to be replaced by the recurrent sanctification of sheer force; if national policies adopt as a deliberate instrument the dispersion all over the world of millions of helpless and persecuted wanderers with no place to lay their heads; if men and women are not free to think their own thoughts, to express their own feelings, to worship God?

As a nation we will assure ourselves that we are in a position to defend ourselves from all aggression from whatever source it may arise, and to be prepared to join with our fellow democracies of the New World in preserving the Western Hemisphere safe from any threat of attack.

But the nations of the New World can do still more; they can guard and maintain inviolate the freedom of men's souls and intellects by the preservation and strengthening of the spirit of tolerance and the democratic institutions which are instinct in the national lives of every one of our 21 nations; and through such example and through their continued close cooperation they can greatly aid in the establishment of a better world order.

HISTORY OF THE U. S. MARINE CORPS

1. After nineteen years since the establishment of the Historical Section at this Headquarters for the purpose of collecting historical material of interest and writing a history of the Marine Corps, such a history has been completed by Lt. Col. C. H. Metcalf, U. S. M. C., and is now ready for publication. The history as written presents the services of the Marine Corps to the Nation and is designed not only to be of interest to Marine Corps personnel but to all persons in any way interested in the Corps. There are no Government or Marine Corps funds available for its publication, but it is not even believed desirable that it should be "officially" printed. In order to assure a wide distribution of the book it should be published by one of the better known publishing houses having access to the book trade, equipped to procure the desired publicity and reviews, and be in position to at least place the history in the larger libraries throughout the country. Unfortunately, perhaps, a history of the Marine Corps does not have sufficient general interest to warrant its publication as a business venture by one of the desired publishers. It is therefore necessary to underwrite its publication in a manner that will insure the publisher against undue risk.

2. Since there is no official way to make a guarantee to the publisher, it is the desire of this Headquarters that the officers and enlisted men of the Marine Corps, the post exchanges, post amusement funds, and post and other libraries assist in every way by advance orders the satisfactory publication of our history. In this connection post exchanges should anticipate their probable sales for a considerable period as there is no certainty that the book will have more than one printing.

3. The Historical Section will circularize all officers and warrant officers of the Marine Corps, post exchanges, personnel at Headquarters, Marine Corps and the naval library facilities for subscriptions. All commanding officers will bring this matter to the attention of the enlisted men of their command, procure as many advance orders as possible for delivery through exchanges or in any other manner desired and submit to this Headquarters a report of all orders showing the names and number of copies desired.

4. The present indications are that the delivery price of the book to our personnel will not exceed $3.00, if subscribed for in advance. Its list price by the publisher will probably be $4.50. It will contain approximately 500 pages, be as fully illustrated as possible within the price and will be attractively bound. If the response for advance orders is large enough the price, of course, will be considerably reduced.

5. The Major General Commandant feels that a copy of this history would be a valuable addition to the library of any one interested in the Marine Corps, particularly our own personnel. It would be of valuable assistance in helping our younger officers and enlisted men to understand the place of the Marine Corps in our scheme of national defense and what it has stood for in the past. A knowledge of history being a means of avoiding the mistakes made by those who have gone before us and of profiting by a knowledge of how they succeeded, the history will undoubtedly be particularly valuable to all officers. It is hoped that there will be a whole-hearted and prompt response from the entire Corps so that the Historical Section can proceed with having the history published and distributed in a satisfactory manner to all concerned.

T. Holcomb.

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THE MARINE CORPS GAZETTE

MAJOR SHALER LADD, U.S.M.C., *Editor*

Published Quarterly By

THE MARINE CORPS ASSOCIATION

Room 3317—Headquarters U. S. Marine Corps, Washington, D. C.

Printed at 32nd St. & Elm Ave., Baltimore, Md.

Authors are responsible for all statements contained in articles published in this magazine.

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